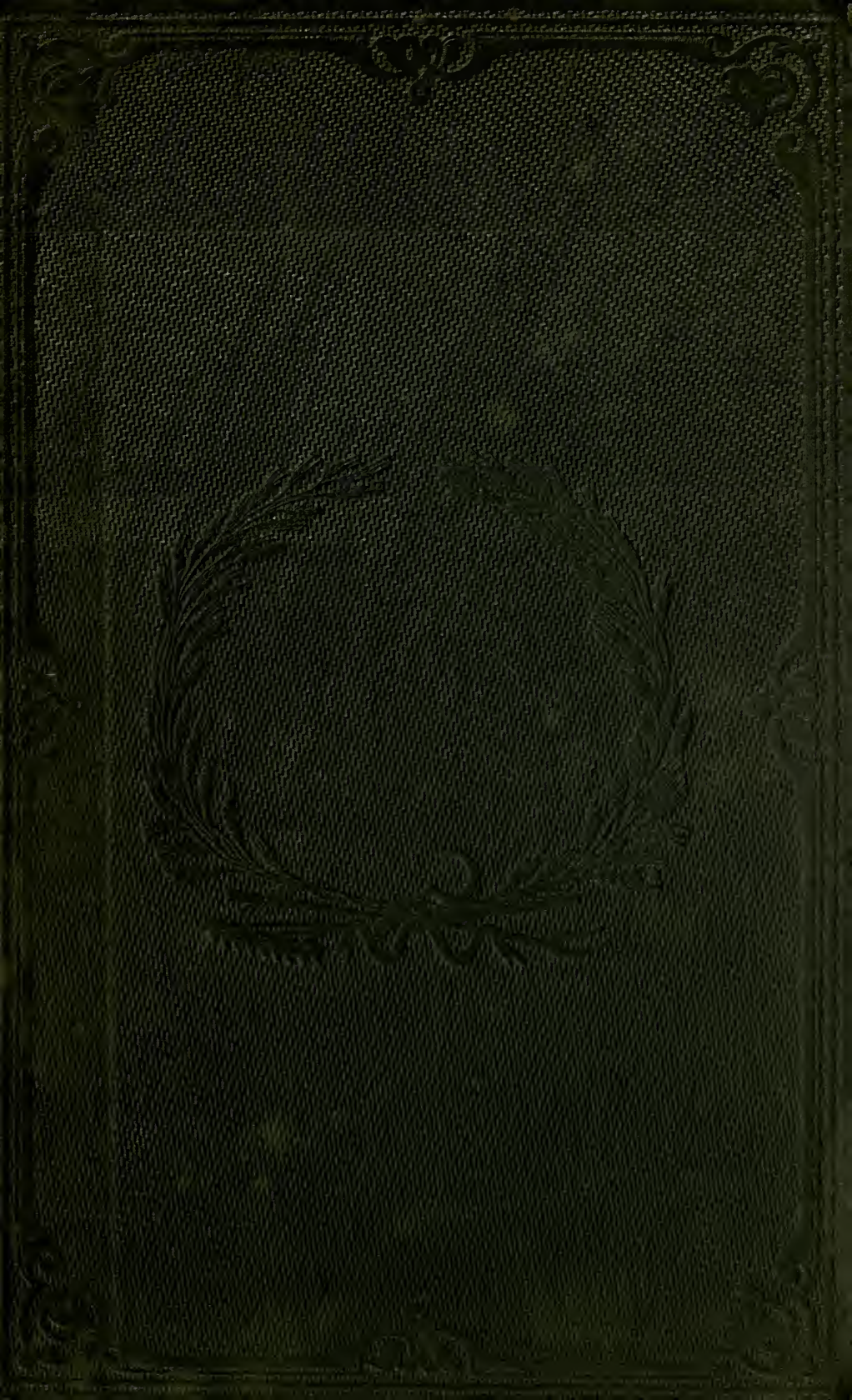

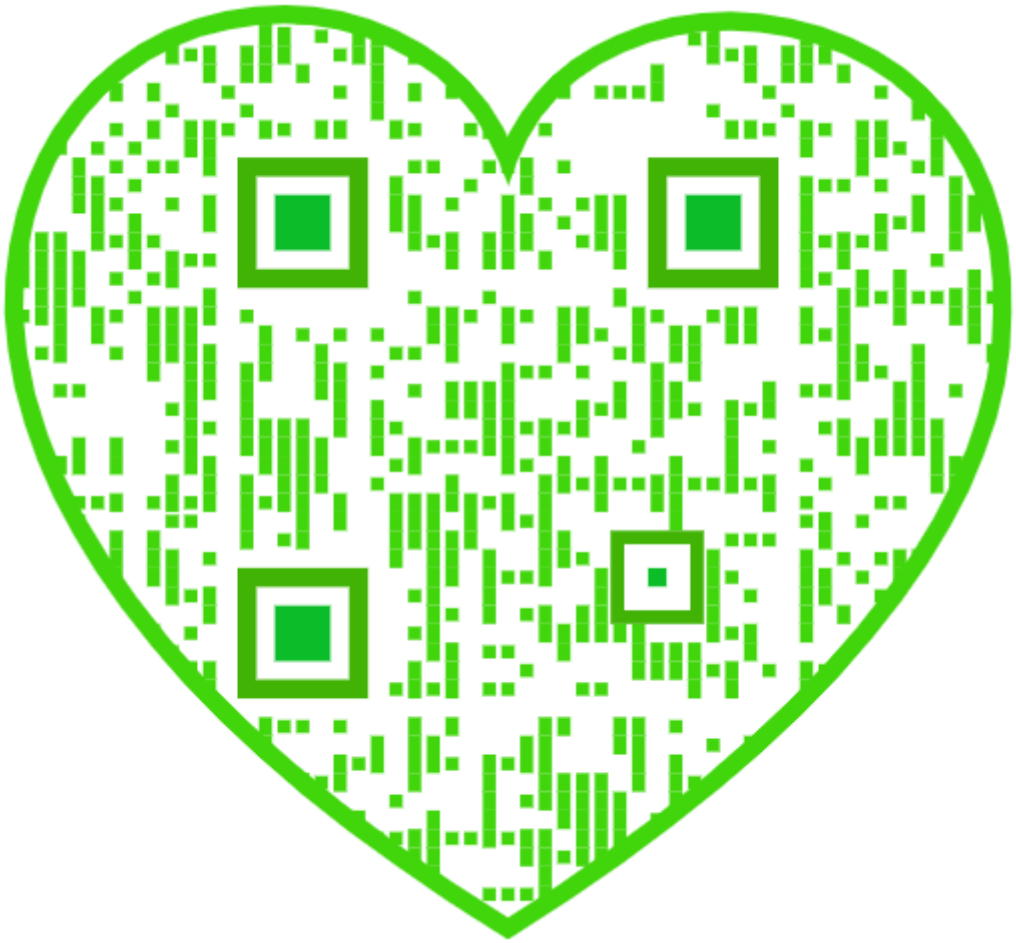

RURAL ECONOMY

OF

ENGLAND, SCOTLAND, AND IRELAND

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THE

RURAL ECONOMY

OF

ENGLAND, SCOTLAND, AND IRELAND

BY

LÉONCE DE LAVERGNE

TRANSLATED FROM THE FRENCH

WITH NOTES BY A SCOTTISH FARMER

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GENERAL

PREFACE.

This Essay is a fragment of the course of Lectures which I had undertaken for instruction in Rural Economy at the Agricultural National Institute. Although denied the opportunity of using them in the way of oral teaching, I considered that these notes might prove useful in another form, and began by publishing extracts from them in the *Revue des Deux Mondes.* The kind reception which the series met with, both in France and in England, has induced me now to collect them into one volume.

I hope soon to give a sequel to this publication. In the years 1851 and 1852, during the short existence of the Agricultural Institute, I found time to compose a complete course of Rural Economy. I am now revising my Lectures, and hope soon to publish them. But I thought it advisable, for the sake of the science itself, to precede the preceptive part of the subject by a practical demonstration of its utility.

Some persons have done me the honour to consult me as to what should be done in France, in order that we may benefit from the examples of England and

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Scotland. The answer to this question will be found in my Course of Rural Economy, so far, at least, as I alone can give it; for it must be remembered that my department of instruction formed but one branch of the subject, and that the studies of agriculture, of *zootechnie*, of tillage, and other applied sciences—natural philosophy, chemistry, &c.—form an indispensable addition.

Unfortunately, our country is much more clever at destroying than in constructing, and all that now remains of this great attempt belongs to the past. Some precious germs, which will by-and-by bear fruit, have, however, succeeded in springing up. I shall give but one instance, because it has been confirmed by an academic reward;—I speak of the investigations of M. Doyère, Professor of Zoology, as to the means for destroying noxious insects, and particularly the corn *alucite*, whose ravages cause the loss periodically of enormous sums. Other results of these few years of study will successively come to light.

If I may judge from the numerous communications which I receive, public attention with us is at this moment directed in a lively manner towards agriculture. I congratulate myself upon this movement, feeling proud to have contributed my humble part towards it; but I must at the same time confess, that it gives me some cause for uneasiness.

Agriculture is the most beautiful of all arts, but it is also the most difficult: it requires, especially, patience and perseverance—rare qualities among us. Let us be careful lest we add many chapters more to the already

long history of our agricultural mistakes ; in such case, we should soon relapse into discouragement, and at last discover that we had retrograded in place of having advanced.

I address those especially who, like myself, after having tried other careers, have turned towards a country life, disgusted by the revolutions of the times. In the bosom of nature, which changes not, they will find what they seek,—occupation in undisturbed quiet, with an independence resulting from their labours, always provided they do not undertake too much at once.

Those who may desire to devote their time to agricultural improvements should, first of all, study the local causes of what is called the routine. Very often these causes are only transitory, or accidental, and may be boldly set aside. Often, also, they are deep-rooted and fundamental, and failure is certain if they are attacked by direct means. The most prudent plan is, to proceed step by step, getting knowledge always by experience, and leaving a large margin to time. If the practice which attempts to do without theory results in disappointment, the theory which pretends to dispense with practice is vain and rash.

There is a radical difference between France and England ;—in the one is to be found the extreme simplicity, and in the other the extreme variety, of the problem. In France the mistake is almost always committed of generalising too much, whereas nowhere is this less admissible owing to the immense variety of soils, climates, crops, races, origins, and social and economical conditions, which make an infinitely multiplied world of our apparent unity.

But to return to this Essay, had I not feared to increase needlessly the bulk of the volume, I would have quoted the numerous authorities from whence I have drawn information. I confine myself, however, to remarking here, that, independently of my own personal observations during the four visits which I have paid to England since 1848, I have consulted principally the *Letters upon English Agriculture in* 1851, by Mr Caird, Commissioner for the *Times* (the best work of the kind which has appeared since Arthur Young), the excellent works of Messrs Porter and M'Culloch, and the English periodical Magazines devoted to subjects of economy and agriculture.

I cannot close this preface without also rendering my public acknowledgments to M. le Comte de Gasparin, who, during two years, fulfilled the duties of Director-General of the Agricultural National Institute, and who, in that capacity, sought to encourage in every way the labours of myself and colleagues. I could wish that this testimony of acknowledgment and respect from one of his most devoted coadjutors might soften this severe disappointment, which has come upon him in his old age, after a life so nobly consecrated to the public good, and particularly to the advancement of national agriculture.

L. L.

PARIS, 15*th March* 1854.

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FRENCH WEIGHTS AND MEASURES, WITH THEIR ENGLISH EQUIVALENTS.

SUPERFICIAL MEASURE.

	Square yards.	
Centiare,	1.1960	
Are (a square decamètre),	119.6040	
Décare,	1196.0460	
Hectare,	11960.4604	or 2 acres, 1 rood, 35 perches.

Arpent = 40.466 ares, = 4840 square yards, or 1 Imperial acre.

WEIGHTS.

	Grains avoirdupois.		
Miligramme,	0.0154		
Centigramme,	0.1543		
Décigramme,	1.5434		
Gramme,	15.4340		
Decagramme,	154.3402		
Hectogramme,	1543.4020	or 3.527 oz.	
Kilogramme,		35.300 „	or 2.206 lb.
Myriagramme,			22.0485 „
Quintal,			220.4850 „
Millier or bar = 9 tons 16 cwt. 3 qrs. 12 lb.		or	22048. „

MEASURES OF CAPACITY.

	Cubic inches.		
Militre,	0.06103		
Centilitre,	0.61028		
Décilitre,	6.10280		
Litre (a cubic decimètre),	61.02803	or 0.264	wine gallons, or 2.1135 wine pints.
Decalitre,		2.642 „	
Hectolitre,		26.419	or 22 imperial gallons, or 2.7513 imperial bushels.
Setier,		4.4300 „	„

LONG MEASURE.

Millimètre,	0.03937	inches.	
Centimètre,	0.39371	„	
Decimètre,	3.93710	„	
Mètre,	39.37100	„	or 3.2809 feet.
Decamètre,		32.8091 „	
Hectomètre,		328.0916 „	or 109.363 yds.
Kilomètre,			1093.633 „
Myriamètre,			10936.330 „
League,	2.422	miles.	

MONEY.

1 franc = 100 centimes = 9½d.
25 francs, £1.

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RURAL ECONOMY OF ENGLAND.

CHAPTER I.

THE SOIL AND CLIMATE.

When the Great Exhibition attracted to London an immense concourse of the curious from all parts of the world, strangers were struck, but not astonished, at the great industrial and economical power of the English. People generally were prepared for the great show which the productions of Manchester, Birmingham, Sheffield, and Leeds made under the transparent roof of the Crystal Palace; and also for that other, and not less wonderful sight, the docks of London and Liverpool, with their immense piles of warehouses and countless shipping. But what caused surprise to more than one observer, was the agricultural development displayed in those departments of the Exhibition set apart for implements of husbandry and English agricultural produce. Of this no idea had been formed.

In France, perhaps, more than anywhere, and that too notwithstanding our proximity, the belief that agricul-

ture in England had been neglected for the sake of the manufacturing and mercantile interests, has hitherto been too prevalent. Ignorance of the principle and effects of Sir Robert Peel's 'customs' reform has contributed to spread among us these erroneous ideas. The fact is, that English agriculture, taken as a whole, is at this day the first in the world; and it is in the way of realising further progress. I design concisely to show its actual condition; to point out the true causes of that condition; and to draw inferences as to its future. France may derive some useful lessons from this study.

Nearly five years ago, a serious and disastrous crisis occurred, almost simultaneously, although from different causes, in the agricultural concerns of the two countries. I shall attempt separately to estimate the bearing of each. But first it is of consequence to inquire what was the position of agriculture in the two countries previous to 1848. Two kinds of questions are connected with this comparison; the one, fundamental, belonging to the entire history of their development; the other transitory, arising out of the crisis.

In the first place, we shall endeavour to give some account of the theatre of agricultural operations—the Soil.

The British Isles have a total area of thirty-one millions of hectares,* or equal to about two-thirds of the French territory, which contains not less than fifty-three. But these thirty-one million hectares are far from being of uniform fertility; on the contrary, they exhibit perhaps greater differences than are to be found in any other country. It is well known that the United Kingdom is divided into three principal sections—England, Scotland,

* A hectare=2½ English acres. *In acres*, the amount for the British Isles is 77,394,433: England proper, 32,342,400.—See *Porter's Progress.*—J. D.

and Ireland. England alone forms about one-half of the whole territory, while Scotland and Ireland divide the remainder between them in nearly equal portions. Each of these three grand sections should itself be divided in respect to farming, as in other points of view, into two separate parts.

England, into England proper and Wales; Scotland, into Highlands and Lowlands; Ireland, into south-east and north-west regions. Enormous differences exist between these different districts.

England proper—the largest and richest portion of the three kingdoms—contains thirteen millions of hectares, or a little more than a third of the total extent of the British Isles, and equal to one-fourth of France. It is this portion especially which is now to be considered. In comparing with it the best-cultivated fourth part of France—viz. the north-west angle, comprising the ancient provinces of Flanders, Artois, Picardy, Normandy, the Isle of France, and even adding to it the richest departments in other parts of the country—we have not an equal extent of well-cultivated land to oppose to it. Certain parts of our soil, such as almost the entire department of the Nord, and some other detached districts, are superior in productiveness to the best of England: others, such as the departments of the Seine Inferieure, the Somme, Pas de Calais, and Oise, may sustain a comparison; but thirteen million hectares, equal in cultivation to the thirteen million hectares of England, we do not possess.

Can it be that the soil and climate of England are naturally superior to ours? Far from it. One million hectares out of the thirteen remain entirely unproductive, having hitherto resisted all attempts at cultivation; of the remaining twelve, two-thirds at least are ungrateful

and stubborn lands, which human industry alone has subdued.

The southern point of the island—forming the county of Cornwall, and more than the half of Devonshire—is composed of granitic soils, similar to those of our Brittany. There, in the ancient forests of Exmoor and Dartmoor, the mountains which terminate at Land's End, and those verging on the Welsh peninsula, are nearly one million hectares of little value. In the north, more mountains—those which separate England from Scotland—cover with their ramifications the counties of Northumberland, Cumberland, Westmoreland, and parts of Lancashire, Durham, York, and Derbyshire. This region, which contains upwards of two million hectares, is worth scarcely more than the former. It is a country famous for its picturesque scenery, studded with lakes and waterfalls ; but, like most picturesque countries, offering few resources for cultivation.

Wherever the ground is not hilly, it is in general naturally marshy. The counties of Lincoln and Cambridge, now reckoned, especially the first, among the most productive, were formerly but one vast marsh partially covered by the sea, like the polders of Holland opposite to them on the other side of the Channel. Numerous peat-mosses still show the primitive state of the country. In other parts are extensive sands abandoned by the sea: the county of Norfolk, where that system of agriculture arose which has made the fortune of England, is nothing else.

There remain the undulating hills, which form about half of the whole surface, and which are neither so dry as the mountains, nor so wet as the undrained plains ; but these lands are not all of the same geological formation. The Thames basin is composed of a stiff clay,

called *London clay*, from which bricks are made for the buildings of the immense capital, and which is tilled only with difficulty. The counties of Essex, Surrey, and Kent, as well as Middlesex, belong to this clay bed,—called in England *stiff land*, and well known to every agriculturist as exceedingly troublesome,—which aggravates still further the coldness of the climate. Left to itself, this clay never dries in England; and when not transformed by manure and improved by draining, farmers despair of making anything of it. It prevails throughout the south-east, and also makes its appearance in many parts of the midland districts, as well as in the east and north.

A long band of chalky lands of indifferent quality runs through this great bed of clay from south to north, forming the greater portion of the counties of Hertford, Wilts, and Hants; the chalk shows itself almost in a pure state on the surface.

The sandy clay lands, with calcareous subsoil, and the loams of the lower valleys, occupy only about four millions of hectares. The rivers in this narrow island being shorter, and the valleys more confined than in other countries, alluvial lands are rather scarce. It is the light soils which predominate, what were formerly called *poor lands*. These, not very long ago, were extensive moors, coming up to the very gates of London on the west; but now, through cultivation, they have become almost as productive as the loams. A special method of working, suited to their nature, was necessary, in order to turn them to such good account.

It is the same with the climate. British agriculturists have known well how to avail themselves of the peculiarities in their climate, for in itself there is nothing very seductive about it. Its mists and rains are pro-

verbial ; its extreme humidity is little favourable to wheat, which is the prime object of all cultivation ; few plants ripen naturally under its dull sky; it is propitious only to grasses and roots. Rainy summers, late autumns, and mild winters, encourage, under the influence of an almost equal temperature, an evergreen vegetation. Here its action stops ; nothing need be asked of it which demands the intervention of that great producing power, the sun.

How superior are the soil and climate of France! In comparing with England, not the fourth only, but the north-west half of our territory—that is to say, the thirty-six departments grouped around Paris, exclusive of Brittany—we find more than twenty-two millions of hectares, which surpass in quality, as they do in extent, the thirteen millions of English hectares. Scarcely any mountains; few natural marshes ; extensive plains, sound almost throughout ; a soil sufficiently deep, and of a nature most favourable to production; rich deposits in the broad valleys of the Loire and Seine, with their tributaries ; a climate not so moist, but warmer—less favourable perhaps to meadow vegetation, but more suitable for ripening wheat and other cereals ; all the productions of England obtained with less trouble ; and, in addition, other valuable products, such as sugar, textile and oleaginous plants, tobacco, wine, fruits, &c.

It would be easy to carry out this comparison step by step, and to oppose, for example, to Leicestershire, which is the most naturally fertile of the English counties, our magnificent department of the Nord, to the chalky lands of Wiltshire those of Champagne, sands to sands, clays to clays, loams to loams ; and thus find for most of the English districts one corresponding in the north of France. Such a detailed examination would demonstrate in some

measure acre by acre, and, with few exceptions, the superiority of our territory ; there are no lands among the worst in France, for which we do not find still worse on the other side of the Channel ; nor so rich in England, which with us may not be equalled, or even surpassed.

Wales is just a mass of mountains, covered with barren moors. Including the adjacent islands, and that part of England bordering upon it, it contains two millions of hectares, only half of which are capable of cultivation. In France, a similar country is to be found in the peninsula of Brittany, whose inhabitants are connected with the Welsh by a common origin. But besides that Brittany occupies relatively less space upon the map of France, the English Armorica is more rugged and wild than ours. The resemblance certainly is not very perfect, excepting in some few localities.

The two divisions of Scotland are pretty equal in extent, and are both well known by the names which poetry and romance have rendered familiar. The Lowlands occupy the south and east, the Highlands the north and west. Each of these moieties, with adjacent islands, contain about four millions of hectares.

The Highlands, without exception, form one of the most unfertile and uninhabitable countries in Europe. Imagination pictures it only through the charming fancies of the great Scotch novelist ; but if most of its scenery owes its reputation to its sterile grandeur, these rugged beauties are little capable of being brought under cultivation. It is an immense granite rock cut up into sharp peaks and deep precipices, and, to add still more to its ruggedness, extending into the most northerly latitudes. The Highlands face Norway, which in many respects they resemble. The North Sea, which surrounds and penetrates them in every direction, beats against them with its continual

storms ; their sides, unceasingly torn by winds, and flooded with those never-failing waters which collect and form immense lakes at their base, possess only here and there a thin covering of vegetable soil. Winter lasts there nearly all the year ; and the islands belonging to them—the Hebrides, Orkneys, and Shetlands — partake of the gloomy Icelandic character. More than three-fourths of the Highlands is uncultivated, and the small portion which it is possible to work requires all the industry of the inhabitants to produce anything. Oats even do not always ripen there.

Where is such a country to be found in France ? That most nearly resembling it is the nucleus of central mountains, with their ramifications, which cover some ten departments, and stretch to the Alps beyond the Rhone —namely, the ancient provinces of Limousin, Auvergne, Vivarais, Forez, and Dauphiné ; but the departments of the Higher and Lower Alps, the poorest and most unproductive of all, and those of Lozère and Haute-Loire, which come next to them, are still greatly superior in natural resources to the celebrated counties of Argyll and Inverness, and the still more inaccessible county of Sutherland. This superiority, more and more marked in Cantal, Puy-de-Dôme, Corrèze, Creuse, and Haute-Vienne, becomes beyond all comparison when we come to oppose to the best straths of the Highlands the Limagne d'Auvergne and the valley of Grésivaudan,—those two paradises of the cultivator dropped into the midst of our mountainous region.

Even the Lowlands of Scotland are far from being everywhere susceptible of cultivation. Numerous ridges cross the country, and may almost be said to unite the Northumberland mountains to the Grampians. Out of the four millions of hectares two are nearly unproductive ;

the other two exhibit almost everywhere prodigies of the most improved farming, especially in the neighbourhood of Edinburgh and Perth;—but only one million of hectares are of rich and deep soil; the rest is poor and thin. As to climate, it is sufficient to bear in mind that Edinburgh is in the same latitude as Copenhagen and Moscow. Snow and rain fall in great abundance, and the fruits of the earth have only a short and precarious summer for bringing them to maturity.

The part of France which best corresponds with the Lowlands of Scotland is the ten departments which form the eastern frontier, extending from the Ardennes to Dauphiné by the Vosges and Jura; but these again are superior both in soil and climate. Nature has made the pastures of Lorraine and Franche-Comté at least equal to those of Ayr and Galloway, and Alsace is better than the Lothians. The most northerly point of this region is six degrees south of Berwick, and its most southern is in the same latitude as Venice; the hot air of Italy blows as far as Lyons.

Of the two divisions of Ireland, that of the north-west, embracing a fourth of the island, and comprehending the province of Connaught, with the adjacent counties of Donegal, Clare, and Kerry, resembles Wales, and even, in its worst parts, the Highlands of Scotland. Here again are two millions of unsightly hectares, the frightful aspect of which has given rise to the national proverb, "Go to the devil or Connaught." The other, or south-east and much larger division, since it embraces three-fourths of the island, and includes the provinces of Leinster, Ulster, and Munster, equal to about six millions of hectares, is at least equal in natural fertility to England proper. It is not all, however, equally good; the amount of humidity there is still greater than in England. Extensive bogs cover

about a tenth of the surface ; more than another tenth is occupied with mountains and lakes. In fact, five only out of the eight millions of hectares in Ireland are cultivated.*

Deducting the north-west of France, which we have compared to England, and the middle and east to Scotland, the south only remains for comparison with Ireland. This comparison holds good in some respects, for the south of France, with reference to the north, is a distinct country, and inferior in acquired richness, just as Ireland is in respect to England ; but here the likeness stops, for in every other respect no two things can be more dissimilar. The comparison, as in the former instances, and perhaps even to a greater degree, is in favour of France. Our southern region extends from the mouth of the Garonne to that of the Var ; it contains some twenty departments and thirteen millions of hectares ; it has also its mountainous parts in the Pyrenees and Cévennes. But there is a vast difference in fruitfulness between the mountains of Herault and Gard, which produce silk, and even some Pyrenean cantons, where cultivation may be carried to the verge of perpetual snow, and the bleakness of Connaught and Donegal. The further we descend into the plains, the superiority becomes more and more striking, notwithstanding the natural advantages of Ireland, which have acquired for it the poetical cognomen of *First flower of the earth, and first gem of the sea.*

The flat country which extends across the island, from Dublin to the bay of Galway, and which is the pride of Ireland, is surpassed in richness, as well as in extent, by the magnificent valley of the Garonne, one of the finest agri-

* 12,125,280 acres out of 19,441,944.—J. D.

cultural countries in the world. The Golden Vale, which is the boast of Limerick, the pastures on the banks of the Shannon, the deep lands around Belfast, so favourable to the production of flax, are doubtless of great value; but the vineyards of Médoc, the soils of Comtat, which grow madder, those of Languedoc, where corn and maize succeed each other, and those of Provence, where the olive and orange ripen, are more valuable still. Ireland has over England this advantage—she has less clay, sand, and chalk, and her soil generally is of good quality; but the south of France has the advantage of her in sky. The Irish bogs find no equivalent in the marshy *landes* of Gascogne and Camargue, which are not so unsuitable for production.

Thus our territory is superior in all points to Great Britain, not only in extent, but in fertility. Our north-west region is more valuable than England and Wales, the middle and east than Scotland, and the south than Ireland.

It is now more than sixty years since that great agricultural authority, Arthur Young, admitted this natural superiority of our soil and climate. At the conclusion of his *Agricultural Tour in France* during 1787–90, he says, "I now come to pass in review all the provinces of France, and I believe that kingdom to be superior to England as regards soil. The proportion of bad lands in England, as compared to the extent of the country, is greater than in France; there is nowhere that prodigious quantity of dry sand which is found in Norfolk and Suffolk. The marshes, heaths, and *landes*, so common in Brittany, Anjou, Maine, and Guienne, are much better than ours. The Scotch and Welsh mountains are not to be compared in point of soil to those of the Pyrenees,

Auvergne, Dauphiné, Provence, and Languedoc. As to the clay soils, they are nowhere so stiff as in England; and in France I have never met with any clay like that of Sussex." This celebrated agriculturist renders similar homage to the sky of France. "*We know*," says he with pride, "*how to turn our climate to best account, and the French in this respect are still in their infancy.*" But as regards the intrinsic value of the two climates, he does not hesitate to give ours the preference. This conviction is repeated in every page of his book; and yet, in spite of exceptions of detail—numerous, no doubt, but which do not destroy the broad fact—England, even previous to 1848, was better cultivated and more productive over an equal surface, than the north-west of France. The Lowlands of Scotland at least rivalled the east; and even Ireland, poor as it is, was richer in production than our south. The Highlands of Scotland alone, as a whole, are surpassed by their corresponding region, and that not from any fault of the inhabitants. There is, however, a portion of the French territory beyond the Continental bounds, which may be compared to the Scotch Highlands for the actual value of its productions, notwithstanding the great disproportion between their natural resources. I mean the island of Corsica. And this comparison may be extended still further: both countries are difficult of approach, and both were at one time possessed by an untamable race of herdsmen and robbers.

If France has remained behind the United Kingdom, she is considerably in advance of the other nations of the world, excepting Belgium and Upper Italy, which possess superior natural advantages. The causes of this relative inferiority, however, do not originate with our agricultural population—the most laborious, intelligent, and economical,

perhaps, that exist. These causes are manifold and deeply seated; and I propose to inquire into them; but first I must prove what I have advanced. For this purpose, I am obliged to enter into some details which are purely agricultural. I proceed, then, to show, in the first place, *how* it is that English agriculture is richer than ours, and shall then inquire *why* it is so.

CHAPTER II.

SHEEP.

The most striking feature in English agriculture, as compared to ours, consists in the number and quality of its sheep. One has only to pass through any of the English counties, even by railway, to discover that England feeds a proportionately greater number of sheep than France; it requires only a glance at any one of these animals to see that they are much larger in the average, and must give a greater weight of meat than ours. The truth of this must be perfectly obvious to the most superficial observer; and it is not only confirmed by an attentive examination of the facts of the case, but such an inquiry leads to the discovery of unexpected results. That which to the mere traveller is simply a matter of curiosity, becomes for the agriculturist and economist the subject of investigations, which astonish even him from the immensity of the results.

The English farmer, with that instinctive calculation which distinguishes the class, has not failed to observe that of all animals the sheep is the easiest to feed, the one which derives the greatest benefit from the food which it consumes, and at the same time gives the most active and rich manure for fertilising the land. His first object consequently is, to keep a great many sheep. In Great Britain there are immense farms which have

scarcely any other stock. While our farmers have had their attention distracted by many other things, the rearing of the sheep tribe has from time immemorial been considered by our neighbours as the most important of agricultural pursuits. As if symbolical of the importance which the nation attaches to this production, the Lord Chancellor of England, as President of the House of Lords, sits upon a wool sack (so called). Mutton also is highly appreciated by the English.

For the last hundred years France and the British Isles have kept equal pace in the number of their sheep; in both countries it has doubled. It is calculated that in 1750 each possessed from seventeen to eighteen million head; at present the numbers may be reckoned at thirty-five millions. The French official statistics give thirty-two millions, and M'Culloch makes the number the same for the United Kingdom;* but both I believe are a little understated. This apparent similarity, however, conceals a serious inequality. The thirty-five millions of English sheep live upon thirty-one millions of hectares, those of France upon fifty-three. To have proportionately as great a number as our neighbours we should have sixty millions.

This difference, which so far is material, is farther increased when we compare France with England proper; the two other portions of the United Kingdom have but few sheep relatively to their extent. Scotland, in spite of all her endeavours, can maintain only about four millions; Ireland, which from its pastures ought to rival England, reckons at most only two millions upon eight millions of hectares; and this is not one of the least of the marks of its inferiority. England alone has about thirty millions upon fifteen millions of hectares, or proportionately three times more than France.

* 31,754,189.

To this numerical difference has to be added a no less important difference in the quality.

For a century past, independently of previous progress, which had been greater in England than with us, the two countries have pursued two opposite objects in the rearing of their flocks. In France wool has been looked upon as the principal product, and meat the accessory; in England, on the contrary, the wool has been looked upon as the accessory, and meat the chief production. From this simple distinction, which at first sight appears unimportant, arise differences in results which count by hundreds of millions of francs.

The efforts which France has made during the last eighty years to improve the race of sheep may be summed up almost entirely in the introduction of merinos. Spain formerly was the sole possessor of this superior breed, formed by slow degrees upon the immense table-land of Castile. The reputation of Spanish wools induced many other nations of Europe, especially Saxony, to try the importation of the breed. This experiment having succeeded, France also desired to attempt it, and that excellent prince, Louis XVI., who gave the impetus to all the progress since realised, solicited and obtained from the King of Spain a Spanish flock for his farm of Rambouillet. This flock, improved, and to a certain extent remodelled by attentive care, is the stock from which almost all the merinos in France are derived. Two other sub-races, also of Spanish origin, those of Perpignan and Naz, have been surpassed by this one.

The French proprietors and farmers hesitated very much at first to adopt this innovation, and in consequence of the Revolution many years elapsed before any important results were obtained. It was scarcely before the establishment of the Empire that the advantages of

the new race began to be understood. The movement, once begun, gradually advanced; and additional spirit was given to it by the great profits realised.

Much of the success of our farmers, especially in the neighbourhood of Paris, dates from this period. The breeding of rams for propagating the race had become a very lucrative business in the first years of the Restoration. A Rambouillet ram was sold for 3870 francs (£155) in 1825. The fact is, that while the indigenous sheep gave barely a few pounds of coarse wool, the merino fleece gave double or treble the weight of fine wool of greater value. This profit was considerable ; it appeared sufficient to our farmers, who could imagine nothing beyond. Thus it was that the propagation of merinos was considered in France as the supreme object which rural economy had to attain in the rearing of sheep. About one-fourth of the French sheep at the present day consists of merinos and half-bred merinos ; the rest have at the same time improved, both in carcass and wool, simply by means of more skill in their management and better food. Without fear of exaggeration, it may be said that the income of France from sheep has quadrupled during the last hundred years, although the number of these animals has only doubled. This is no doubt a considerable advance ; but we are now about to point out a much greater, in comparing the history of the French flocks for the last hundred years with that of the English for the same period.

England has always possessed a great many sheep ; the British Isles were celebrated for this even in the time of the Romans. The primitive races lived in a wild state, and their descendants are still to be found in the Welsh mountains, the Cornish peninsula, and the Highlands of

Scotland, where, through time, the nature of the soil and climate has only made them more hardy. Nearly three centuries ago, at the period when commercial and manufacturing enterprise began to develop itself in Europe, the breeding of sheep took a start in England unusual elsewhere: wool was then the special object, as with us now in France. The distinguishing feature was between long and short wool breeds, the former being the most highly esteemed. Thus when we commenced to give our attention to the breeding of sheep, England was greatly in advance of us; and this advance became more marked by the new revolution, which established in England the superiority of meat over wool as a production.

About the time that the French Government sought to introduce merinos into France, experiments of the same kind were made in England. Following the example of Louis XVI., George III., who paid a good deal of attention to agriculture, on several occasions caused Spanish sheep to be brought over, which he placed upon his own lands. Those first imported died; the wetness of the pastures engendered diseases which soon destroyed them. Subsequent importations were placed upon drier land, and they survived. From this time it was demonstrated that the climate of England, although it limited the propagation of merinos, was not, at all events, an insuperable obstacle to their introduction. Certain noblemen and celebrated agriculturists actively engaged in the endeavour to naturalise this new race; but the farmers from the first made more serious objections than that of climate. Ideas had changed, and the importance of the sheep as an animal for food began to be foreseen. By degrees this new idea predominated; the Spanish breed has been abandoned even by those who at first vaunted it most, and now neither merinos nor half-merinos are to

be found in England, except among amateurs, as objects more of curiosity than of profit.

The greatest promoter of this preference was the celebrated Bakewell, a man of genius in his way, who has done as much towards enriching his country as his contemporaries Arkwright and Watt. Before his day the English sheep was not fit for the butcher till the age at which ours are now slaughtered; that is to say, about four or five years old. Bakewell thought, very justly, that if it were possible to bring sheep to their full development before that age—to make them fit for being killed at two years old, for example—the produce of the flocks by this single means would be doubled. With that perseverance which characterises his nation, he successfully carried out this idea at his farm of Dishley Grange, in Leicestershire, after many years of labour and expense.

The breed thus obtained by Bakewell is called the *new Leicester*, from the county, or *Dishley*, from the name of the farm, where it took its rise. This extraordinary breed, unrivalled in the world for precocity, produces animals which may be fattened as early as one year old, and in every case have reached their full growth before the end of the second year. To this invaluable quality is added a perfection of shape, which renders them more fleshy and heavier for their size than any known breed. They give on an average 100 lb. of meat net, and sometimes more.

The means adopted by Bakewell for obtaining such a marvellous result, is known to all breeders by the name of *selection*. It consists in choosing individuals of a breed exhibiting in the greatest degree the qualities desired to be perpetuated, and to make use of such only for reproducing. At the end of a certain number of generations,

following always the same principle, the points selected in all the reproducers, both male and female, become permanent; and thus the breed is established. This mode of proceeding appears extremely simple; but what is less so, is the choice of those qualities to be reproduced, in order to arrive at the best result. Many breeders mistake these, and, in a measure, work contrary to their desired object.

Before Bakewell's time, the farmers on the rich plains of Leicestershire, in their desire to produce the greatest possible quantity of meat, sought, above all, great size in their sheep. One of the merits of the illustrious farmer of Dishley Grange, was his apprehension of more certain methods for increasing the yield of butcher-meat; and that precocity for fattening on the one hand, and roundness of form on the other, were of greater importance than excessive development of bone. The new Leicesters are not bigger than those they have replaced; but the breeder can now send three to market in the same space of time that it formerly took him to prepare one; and if they are not taller, they are broader, rounder, and have a greater development in those parts which give most flesh. Of bone, they have absolutely no greater amount than is necessary to support them, and almost all their weight is pure meat.

England was astonished when the results announced by Bakewell were definitively attained. The originator of the new breed, who, like all good Englishmen, looked especially to profit, reaped great advantage from the emulation excited by his discovery. As everybody wished to have Dishley blood, it occurred to Bakewell to let out his rams in place of selling them. The first he let, returned him only 22 francs (18s.) a-head. This was in 1760, when his breed had not reached its perfection;

but in proportion as he continued to make progress, and the reputation of his flock increased, his prices rose rapidly ; and in 1789, a society having been formed for the propagation of his breed, he let his rams to it for one season, at the enormous price of 6000 guineas (more than 150,000 francs). It has been estimated that in the following years the farmers of the midland counties spent as much as £100,000 a-year (2,500,000 francs), in the hire of rams. In spite of all his endeavours to keep the monopoly, Bakewell was not the only one who let rams : this business spread around him, and many flocks were formed after the model of his own.

The wealth which Bakewell has conferred upon his country is incalculable. If it were possible to compute what the Dishley breed has yielded to English agriculturists during the last eighty years, the results shown would be truly enormous.

But this is not all. Bakewell has not only produced a particular kind of sheep, which realises the maximum of precocity and return, but he has pointed out the means by which the indigenous races placed in other circumstances may be improved. The pure Dishley does not thrive equally well everywhere. Bred upon wet and fertile plains, it succeeds only in like situations. It is quite an artificial race—therefore delicate ; rather of a sickly constitution, precocity being only a disposition to premature old age ; and its conformation incapacitating it for exertion, it must have, together with a cool climate and abundance of food, almost entire repose and constant attention, which it repays with usury, it is true, but which it is not always possible to give.

Like every other country, the soil of England may be divided into three parts—plains, uplands, and mountains. The Dishley breed is the type of the sheep of

the plains, and the one superior model which all breeds should resemble as much as possible. Two others have been selected, the one a little inferior to the Dishley, but always tending towards it, constituting the type of the higher ground—the sheep of the *south downs* of Sussex; the other, inferior, in its turn, to the *south downs*, but still somewhat similar in character, has become the type of the mountainous country; it is that which took its rise in the north of Northumberland, between England and Scotland, among the Cheviot mountains.

The south downs of Sussex are ranges of calcareous hills, averaging a breadth of about five miles, by sixty in length, running east and west along the coasts of the channel opposite to France. The beautiful town of Brighton, celebrated for its sea-bathing, and which every year attracts a large concourse of English fashionables, is situated at the front of these hills, which have an appearance peculiar to England; they are entirely destitute of trees, show here and there patches of heath, but are otherwise covered with a fine short and close grass. From time immemorial these pastures have been used for feeding sheep, for which they are admirably adapted; but the ancient race of these downs was small and coarse, and yielded little meat; otherwise their mutton was highly esteemed, and their wool in request for certain descriptions of cloth.

A proprietor of the district, called John Ellman, about the year 1780 applied himself to the improvement of this race, upon the principles which succeeded so well with Bakewell in improving the long-woolled race. One particular circumstance admitted of his making such a trial with some chance of success; all along the Sussex hills there extends a strip of low and cultivated lands, capable of furnishing, and which in effect did provide, a

supply of artificial nourishment for the down sheep during the winter. What keeps the mountain sheep generally in low condition, is not so much the shortness of the pasture during summer, as the almost entire want of food in winter. The truth of this has been abundantly demonstrated by the experiments of Ellman and his successors with the down sheep.

As soon as this sheep had a good winter regimen added to its summer food, it was observed rapidly to acquire a fuller development; and as, at the same time, by a careful selection of reproducers, attention was directed to give it as much as possible aptitude for early fattening, and that perfection of shape which characterises the Dishley, the Southdowns have at last become almost rivals of Bakewell's race. At the present day, after seventy years of skilful treatment, the Southdown sheep gives on an average 80 to 100 lb. net of mutton. They fatten generally about two years old, and are sold after their second clip.* Their mutton is considered superior to the new Leicester; their fleece, like their carcass, has doubled in weight; and as they are continued on the same summer pasturage to which they were accustomed, they have retained their primitive robust and hardy constitution.

It is calculated that the downs of Sussex and neighbouring plains feed now a million of the improved breed; and the race is not confined to its ancient limits, but is widely spread to distant quarters, either as an entire substitute for local varieties, or to mix with, and remodel, those by crossing. It has made its way wherever the soil, not rich enough for the Dishley breed, is yet sufficiently so to provide a proper quantity of winter food in addition to good summer pasture. It predominates in all the districts of lime formation, tends to displace the old breeds

* We believe few males ever reach this age.—J. D.

of Berks, Hants, and Wiltshire, and is found again as far north as Cumberland and Westmoreland.

The history of the Cheviot sheep is not quite so brilliant as that of the Dishleys and Southdowns. Notwithstanding, the breed is not less valuable than the others —inasmuch as it is a means by which every possible advantage is obtained from cold and uncultivated regions. Emanating from the mountains lying between the high chains of England and the cultivated lands, like the Southdowns it owes its improvement to a supplement of artificial nourishment during winter; so far at least as the wild district it inhabits permits. Besides, it has been as much as any other the object of selections conducted with great care, and its shape is now as perfect as can well be. The improved Cheviot sheep fatten in their third year,* and yield on an average 60 to 80 lb. of excellent meat. Their fleece is thick and short. They spend even the winter months upon their native mountains, exposed to all the inclemencies of the seasons, and are seldom sheltered in folds.

In England the Cheviots have scarcely been introduced anywhere out of their native districts, excepting in the most mountainous parts of Wales and Cornwall. In Scotland, whither they were imported by Sir John Sinclair, they have spread widely. They commenced by invading the Highlands of the south, and from thence, following the line of the Grampians, have penetrated as far as the extreme north, where they increase rapidly. Everywhere in these high and stormy regions they dispute the ground with another still wilder race—the black-faced sheep of the heather—which by degrees leave to the newcomers the best walks, in order to take refuge upon the wildest summits.

* Many now in their second.—J. D.

These three breeds tend now to absorb all others, and take entire possession of Great Britain. Some local varieties, remain, however, and develop themselves separately. Such are those of Romney Marsh in Kent, those of the uplands or Cotswold hills of Gloucestershire, the long-wool races of Lincoln and Teeswater,* the short-wool of Dorset and Herefordshire, &c. All these breeds are improved upon the principles followed with the Dishley, Southdowns, and Cheviots. Throughout England, the sheep farmer now seeks either to improve his breed by itself, or by crossing it with others already improved, or else he substitutes one of these breeds for his own—whichever method appears to him most efficacious for increasing the precocity and giving roundness of form to his produce. It may be said that the genius of Bakewell pervades all his countrymen.

Let us attempt a rough comparison between the annual produce derived by the two countries from this equal number of sheep.

The production of wool in France may be put down at about sixty millions of kilos.† This production in England is reckoned at 550,000 packs, of 240 lb. English, equal to sixty millions of kilos also. The two countries would then be on an equal footing as regards wool ; but England takes the lead in an enormous ratio when the question comes to be of meat.

About ten millions of head are annually slaughtered in the British Isles, of which eight millions belong to England alone, yielding, at the average weight of thirty-six kilos (80 lb.) of net meat, three hundred and sixty millions of kilos.

* The long-wools of Lincoln have of late risen into greater favour; and some splendid specimens have recently been exhibited at the great Shows in England.—J. D.

† A kilogramme = 2¼ lb. English.

In France there are about eight millions of head slaughtered, which, at the average weight of eighteen kilos of net meat, equal to one-half the weight of the English sheep, give one hundred and forty-four millions of kilos.

From whence it follows that the produce from the thirty-five millions of French sheep would be represented by the following figures:—

Wool,	. .	60,000,000 of kilos.
Meat,	. .	144,000,000 „

And the return from the thirty-five millions of English sheep by these—

Wool,	. .	60,000,000 of kilos.
Meat,	. .	360,000,000 „

These figures, doubtless, are not of mathematical correctness, but they are near enough the truth to give a sufficient idea of the general facts. I have rather reduced than added to the results given by the statistics in the estimate relating to England, and on the other hand rather increased those as to France. David Low, the learned Professor of Agriculture in the University of Edinburgh, in his *Domesticated Animals of the British Islands*, published several years ago, sets down the value of wool annually produced in England, at 227,000,000 of francs; but this estimate is evidently exaggerated. The French commentator of David Low reckons at the same time the produce of English sheep in meat, at six hundred and forty millions of kilos, which is an impossibility, even supposing all the English sheep were Dishleys. On the other hand, M. Moreau de Jonnès, in his agricultural statistics drawn up from official documents, estimates six millions as the number of head slaughtered in France, thirteen kilos as the average yield, and eighty

millions of kilos the total produce. I have raised all these averages, as appearing to me too low.*

It is easy to foresee how this result, which appears already so great for the British Isles, becomes enormous when speaking of England alone. England feeds two sheep per hectare, whilst the average for France is only two-thirds of a head ; and the produce of the English sheep being besides double that of the French, it follows that the average return of an English sheep-farm is six times greater than a French one.

This sad disproportion does not hold good, doubtless, for some French farms, where the rearing of sheep is as well understood as in England, and where they are even in the way of excelling our neighbours by a judicious mixture of English and Merino blood. It is sufficient to refer, among others, to the magnificent flocks of M. Pluchet at Trappes (Seine-et-Oise), that of M. Malingié at La Charmoise (Loir-et-Cher), and the crossings which are being carried on in the State folds, particularly at Alfort. But France in general remains far behind. Ireland, alone of the British Isles, is on a par with us as regards sheep ; even Scotland is superior; and these figures, in themselves so striking, are far from showing the full amount of bene-

* These calculations are no doubt perfectly sufficient, up to the measure of the information we possess, to warrant the striking result as to the superiority of British agriculture at which M. Lavergne arrives ; and we have been surprised, from the nature of the materials with which he has had to deal, on this as on other occasions, at the superior discrimination he shows in the estimate which he adopts. It is well known that in this country no means have hitherto existed capable of affording correct data as to our agricultural wealth ; and the vague and various statements upon many points which our best statisticians put forth, attest too truly that we are more indebted to individual ingenuity and bold assumption for attempted definite results, than to any opportunity of access, on the part of those who hazard such conclusions, to superior information. It is believed they manage these matters better in France. We have no means of showing precisely the total number of live stock maintained in Great Britain, far less of ascertaining the numbers annually slaughtered ; and we know this has been variously estimated at from a third up to fully two-fifths of the whole—

fit which English agriculture derives from its sheep. It must not be forgotten that this valuable animal not only gives its meat and wool to the farmer, but further enriches him by its manure; and all this return is obtained, while ameliorating the soil which produces it. This is in some measure the perfection of rural economy.

If we now extend our view beyond Europe to the British colonies, we there find the rearing of sheep carried on with a marked predilection for the example set by the mother country. The population there being fewer and more scattered, and wealth consisting more particularly in exports, wool, and not meat, becomes the object of production. At the very time when England was getting quit of her merinos, she was importing them into her colonies. At the antipodes are found uninhabited regions of boundless extent, admirably suited to the Spanish race. That breed is there extensively propagated, and a new world has been created; magnificent towns have sprung up, as if by enchantment, upon these desert lands. Thither the stream of British emigration flows in a continuous tide; and yet it is a feeble animal—the sheep—which produces all these wonders. At one time the people of England

though we believe the former, as adopted by our author, will be found nearest the truth. With regard to wool, again, we feel inclined to adopt a much higher superiority for England even than that above set down; for supposing the numbers of sheep in France and the British Isles to be alike, the greater size and nature of the wool of the majority of the sheep of the latter country may fairly be assumed as producing a fleece nearly twice the weight of the merinos of France. Upon the whole, then, we have no doubt, upon this same number of sheep said to be produced in France and England, the latter will yield upon an average fifty per cent greater weight of wool. This, allowing for the greater number presumed to be clipped in France from the smaller proportionate number slaughtered, as we have seen—and assuming, as we are bound to do, a less price for the coarser variety grown here—may be held as showing the relative *value* of the wool of the two countries to be as sixty to seventy-two, thus giving a still more favourable result for Great Britain. We should not be surprised that Professor Low's estimate in this matter will be found to come nearest the truth.—J. D.

were very much afraid that the gold discovery would cause an abandonment of the pastures; but these fears are a little calmed, and the sheep disputes attention even with the gold.

At the commencement of the present century, England imported half of her foreign wools from Spain, but that country now appears only nominally upon her import lists. Countries which, fifty years ago, did not give a pound of wool, the names even of which were scarcely known, figure upon these lists for enormous quantities. Among these are the British colonies in Australia, which furnish forty million pounds of wool, the Cape of Good Hope and the British possessions in India, which send home ten to twelve million. These wools are of excellent quality, and improve every day. The producers from these far-off countries come to bid against our farmers for the Rambouillet rams, for which they give long prices. Adding to her own the produce of her colonial sheep, England every year realises six hundred to seven hundred millions of francs, which she afterwards doubles by her manufactures. What a wonderful power of human industry, that can thus turn the gifts of Providence to such good account!

Surpassed in the production of meat by the European portion of the British empire, France is again left behind in the production of wool by the colonies and mother country together. Yet, both at home and in our African colony, which is much nearer to us than the Australian colonies are to England, we have abundant means for rivalling her. The same distinction which exists between England and her colonies may some day probably exist also between our own country and colony. Our breeders, without altogether renouncing wool, will have their

attention directed more than hitherto to the production of meat. The Algerian breeders, in their turn, have a wide field open to them for the production of wool. The impulse is given from all quarters, and great progress is made every day in this double path; but we are a little late in setting out, and England has such a start of us, that we shall find it difficult to overtake her.

CHAPTER III.

CATTLE.

The superiority of British husbandry to ours is not quite so great in cattle as it is in sheep. There is still, however, a sensible difference.

The number of horned cattle possessed by France is reckoned at ten million head. The United Kingdom feeds somewhat less, say about eight million ; but if the actual number be less, the proportionate quantity is not so. Of this number England and Wales count five million head, Scotland one million, and Ireland two million ; that is, England has one head for every three hectares, Scotland one to eight hectares, and Ireland one to four. Thus the average of France is in reality superior only to Scotland; and then it is her soil which causes the exception. We are even below Ireland, and a long way below England. So much for numbers ; in quality our inferiority is greater.

There are three descriptions of produce which man may demand from cattle, besides the manure, the hide, and the offal—namely, their labour, their milk, and their flesh. Of these three the least profitable is the first ; and we here again find a distinction quite analogous to that which we observed in respect to sheep ; for while the French agriculturist requires labour from his cattle, in preference to everything else, the British agriculturist looks chiefly

to the milk and the meat. This second distinctive feature has led to differences almost as marked as the first. Let us, in the first place, consider the milk produce in the two countries. France possesses four millions of cows, and the United Kingdom three millions. But three-fourths of the French cows are not really milch cows, and almost all the English ones are. The exigencies of labour requiring a strong and hardy race, agree badly with the condition favourable to an abundant supply of milk. Bad food, want of care, absence of all precaution in the selection of reproducers, and probably also, in the most southern districts, the drought and heat of the climate,—these complete what labour had already begun. In those parts of France where the attention of breeders has been directed, from local circumstances, to the production of milk, results equal, and often superior, to those obtained in England show that, generally speaking, we are placed in as favourable a position for this kind of husbandry as our neighbours; but if our milch cows are as good, and sometimes better than theirs, they are not so widely diffused.

There is no breed of cows in England superior apparently to our Flemish, Norman, and Breton cows, for the quantity and quality of their milk, nor for the proportionate return in milk for the quantity of food consumed. As to dairy produce, if English cheese is in general superior to ours, French butter is better than English; there is nothing in England to be compared with the better qualities of butter made in Brittany and Normandy. In spite of these unquestionable advantages, the total produce of the English cows in milk, butter, and cheese, far exceeds that of the French, although the latter are more numerous, and in certain districts as good or even better milkers. It is the generality of a practice only which can produce great results in agriculture; and

in England it is the universal custom to keep one or several milch cows.

The milch cow race *par excellence* of the British empire comes originally from those islands of the Channel which are detached fragments of our Normandy. The breed usually goes under the name of Alderney, or, in French, Aurigny. The greatest precautions are adopted for maintaining the purity of this race, which is, after all, only a variety of our own. A large number of heifers are bred in the Channel Islands and sold into England, where they are in great request among the wealthy classes for their dairies in the country. Any one who has visited Jersey must have admired these beautiful animals, so intelligent and gentle-looking, which stock the pasture-lands of that island, and which form a part of the family of every farmer there. Although naturally good, the affectionate care with which they are treated has not a little contributed to render them so productive. The Jersey people are as proud and jealous of them as if they were the greatest treasures in the world.

This race, however, has a rival in one which much resembles it, and which has been produced from it by crossings—namely, the Ayrshire in Scotland. It is not long since Scotland was in an almost uncultivated state ; Ayrshire, particularly, has been cultivated, with some degree of care, only within the last fifty or sixty years. This country, at one time covered with heather and moss, has become a sort of Arcadia. Robert Burns, the shepherd poet, was born there. His rustic poetry, which was written about the time of the French Revolution, was coeval with the dawn of agriculture in his native country. The same feeling which inspired the pastorals of Burns, raised up that charming race of Ayrshire cows, whose graceful forms, speckled hides, quiet disposition, large udders, and

rich and abundant supply of milk, realise the ideal of pastoral life. A good cow of this breed will give more than four thousand litres * of milk in the year: on an average they yield three thousand. And these animals are to be found everywhere, both in Scotland and England.

A cow which does not give milk may be considered the exception in that country. Ireland itself possesses two races of milch cows; the one small and coarse, similar to our Breton race, and belonging to the wild mountains of Kerry; the other large and strong, bred upon the rich pastures of the Shannon.

The consumption of milk under every form is enormous among the English. Their habits in this respect are those of past ages. Cæsar said of them, long ago, *Lacte et carne vivunt.* They are not in the habit of preparing their food with fat and oil, like most of the French, but use butter for all culinary purposes; cheese, too, appears at their principal repasts. The quantities of butter and cheese manufactured throughout the whole extent of the British Isles exceed all belief. Cheshire alone produces cheese to the value of a million sterling, or twenty-five millions of francs annually. Not content with what their own dairies give, the English import butter and cheese from abroad; and this circumstance, showing to what extent the national taste is carried, explains the reason why it is that the average price of milk with them is higher than in France. While our producers obtain at most ten centimes per litre (1d. per quart) for their milk, the English get twenty centimes (2d.)

In fine, the milk produce of English cows may be reckoned at three milliards (three thousand millions) of litres, of which one milliard goes to feed the calves, and

* A litre is equal to about a quart (or 2.1135 wine pints).—T.

two for the consumption of man. This gives an average of about one thousand litres for each cow. The production of France is probably at most two milliards, or at the rate of five hundred litres per head, of which at least one-half is consumed by the calves.

Thus, while the French have only one milliard of litres to sell for human consumption, the English have two; and as, in consequence of their large manufacturing population, they obtain double the price for their milk that we do, it follows that the dairy produce of England is worth four times as much as it is in France. The production of the two countries should, then, be represented by the following figures :—

France, 1 milliard of litres at 10 cents, 100 million francs (£4,000,000).
British Isles, 2 milliard of litres at 20 cents, 400 million francs (£16,000,000).

This difference, great though it be, will not cause surprise to any one who may have compared, even in France, the production of dairies in different localities. Between a Normandy dairy, for example, where the production and management of the milk are skilfully conducted, and one in Limousin or Languedoc, where the lactiferous properties of the cow have not been encouraged, the contrast is greater than between an ordinary French dairy and an English one. Not only is the quantity of milk infinitely less, but the price obtained for it is less also. The producer of the centre or south does not know what to make of his milk when he has it; the producer of the north, on the contrary, derives from it a good profit. In every country the art of dairy husbandry is a profitable employment; and the districts which make butter and cheese are always richer than those that do not.

If the work we impose upon our large cattle deprives us of a large revenue in milk, it also deprives us of a not less important return in butcher-meat.

It appears, at first sight, that the work which our cattle are made to go through should have but little influence upon the return they give in meat. It might even be supposed that this work, since it turned the life of the animal to account, admitted of a cheaper production of meat. Experience, however, has shown, that if in some particular instances such was the case, it is a mistake as a rule. Habitual labour causes animals to become hardy, vigorous, and slow; which, like man given to laborious work, causes them to eat much and fatten little, to increase in bony structure, make little available flesh, and that but slowly. Habitual inaction, on the contrary, produces a soft and lazy race, which fatten early, assume rotundity of form and fleshiness, and on an equal amount of food give a better produce for the butcher. Attention on the part of the breeder assists this natural disposition, and increases it, in some measure, to an unlimited extent. To this general cause of superiority may be added other secondary ones, all arising out of the same principle. Thus, where labour is the first consideration, the animal is not killed until it has finished its office; but, on the other hand, where meat only is sought, it is slaughtered just at that period when it gives most. Again, with animals of draught, poor agriculturists are easily induced to increase the number in proportion to their requirements, without considering the quantity of food they can give them. In this way they are led to breed small and lean animals, which, after all, like the ass, fulfil their intended purpose, but beyond that are valueless: when on the other hand, however, the object is meat, they very soon learn to have only as many as they can afford to feed well, because these derive more benefit from what they eat.

The result of all this is, that, contrary to appearances,

it is the animals for slaughter which make the best return for what they consume; and that the working of horned cattle, whether necessary or not, instead of being profitable, entails a loss.

It was, again, the celebrated farmer of Dishley Grange, Robert Bakewell, who gave the spur in England to the improvement of cattle, considered specially with reference to beef. His mode of proceeding was similar to that practised with sheep, only individually he was not so fortunate. The sheep, as produced by Bakewell, continues to be the most perfect type of the animal for the butcher. The race of cattle which he bred was not so successful. The long-horned cattle of the midland counties, which he selected as the subject for his operations, is a race in many respects defective. In spite of his ability and perseverance, he was not able to modify it sufficiently to eradicate its primitive defects. This race is now pretty generally abandoned; but if this great breeder did not altogether succeed in his undertaking, he has at least given examples and models which have everywhere been followed, and have caused an improvement in all the English races. There probably does not exist at this day in Great Britain a single head of cattle which has not been considerably modified according to Bakewell's method; and if none bears his name, as among the woolly tribe, all have equally received his stamp.

Among the improved breeds of long standing, the short-horn of Durham ranks first. It took its rise in the rich valley of the Tees, and appears to have been formed originally by a cross between the Dutch cow and the native bull. When Bakewell's ideas spread in England, this race was already remarkable for predisposition to fatten, and for its lactiferous qualities. The brothers Collins, farmers at Darlington, first thought of applying

these principles to the race of Tees valley about the year 1775, and they obtained almost from the first important results. The herd of Charles Collins had acquired such a reputation in the space of thirty years, that when sold by auction in 1810, the forty-seven animals of which it was composed, and of which twelve were under a year old, were purchased for 178,000 francs (£7100). The race of improved short-horns has spread since that period throughout the United Kingdom, and was some time ago introduced into France. The animals bred from it may be fattened as early as two years old, and attain at that age a weight which no other breed can arrive at so soon. Their head, legs, and bones, have been reduced to such small proportions, and the more fleshy parts of the body so largely developed, that nearly three-fourths of their weight is meat.

After the Durham short-horn, which among cattle is what the Dishley breed is among sheep, come the Hereford and Devon breeds, which in their turn may be compared to the Southdowns and Cheviots. The Hereford breed follows closely upon the Durham, and is even more generally sought after, as offering almost an equal precocity, the same aptitude for fattening, but with greater hardiness. The county of Hereford, from whence it comes, lies at the foot of the Welsh mountains; and although renowned for its woods, its pastures, and its landscape, possesses a soil of but indifferent fertility. The cattle it produces are rarely fattened in the country, but are purchased at an early age by graziers, who bring them into more fertile districts, where they undergo their full development: a mode of treatment not easily accomplished with the Durhams, which require an abundant supply of food from their birth. Herefordshire is thus to a great portion of England what

Auvergne or Limousin is to France—a breeding country, the produce of which is exported at an early period, and by degrees reaches the market of the capital. To a contemporary of Bakewell, called Tomkins, is due the improvement of the Herefords.*

The Devon is a mountain race, which at one time was much used for work, and in some places is so still. It is small, but admirably formed.

All the other races of Great Britain, without having reached precisely the same degree of perfection, have been improved in the same way. Scotland produces several which have a great reputation. A large number of the Scotch cattle leave their mountains at about three years old, to be fattened in England ; of such are those called Galloways, the black race without horns from Angus, and that excellent breed from the Western Highlands—one of the most wonderful creations of man : it lives without shelter upon the wildest mountains of the north, and, notwithstanding the barrenness of the soil and severity of the climate, reaches an extraordinary average weight. The value of this animal is further increased by the excellent quality of its meat.†

The comparative results of the two systems may be stated as follows:—

In France the number of cattle annually slaughtered is four millions, producing a total of four hundred million kilogrammes of meat, at the rate of one hundred kilos average weight. Official statistics make it only three hundred millions.

In the British Isles the number annually slaughtered

* The improved Herefords, treated as liberally as the short-horns, may be said to attain equal precocity.—J. D.

† A complete collection of these valuable breeds had been made in France at the Agricultural National Institution; but in consequence of the breaking up of that establishment, it has been dispersed.

is two millions of head, giving a total of five hundred million kilogrammes of meat, at the average of two hundred and fifty kilos.*

Thus with eight million head of cattle, and thirty million hectares, British agriculture produces five hundred million kilos of beef; whilst France, with ten million head, and fifty-three million hectares, produces in all only four hundred million.

This new disproportion is perfectly explained, independently of the difference in race, by the difference in age of the animals slaughtered. The French cattle are slaughtered either too soon or too late: the paramount necessity for maintaining cattle intended for labour obliges us to kill a great number of calves at that age when growth is most rapid. In our four millions of head figure two and a half millions of calves, which, on an average, give not more than thirty kilos of meat; those that survive are not slaughtered until an age when growth has long ceased—that is to say, after the animal has for several years continued to consume food which has not served to increase its weight. The English, on the con-

* It has long been matter of regret that hitherto in this country we have had no means of correctly ascertaining the number and value of the stock of cattle in Great Britain; far less can an accurate estimate be made of the proportion annually slaughtered, or of the income thus derived. M. Lavergne has, with his wonted care, adopted, in the number above set down, those which exhibit a fair average of the estimates of our best authorities. The inquiry so long desired, and now set on foot by the Government, will, we have reason to believe, this year furnish with great precision the *gross* numbers of live stock of all ages and descriptions maintained in the country; but that the returns should be of real use, it is further requisite that some discrimination should be made as to age and variety of breed, and that we be made acquainted with the proportion annually disposed of for the shambles. The machinery at present in use we have no doubt would easily effect this, and we trust to see it attempted in another year. Until this additional information is obtained, there will exist nearly the same difficulty in securing a correct estimate of the value of the chief source of our agricultural wealth. In proof that there is some reason to suppose this has hitherto been much underrated, we think it may not be uninteresting to refer to the following facts lately educed in relation to this matter, upon which some dependence may be placed. From

trary, kill their animals neither so young, because it is when young that they lay on flesh most rapidly, nor so old, because then they have ceased to increase: they seize the precise period when the animal has reached its maximum growth.

These results, so favourable to English rural economy, are reduced, it is true, by the value of the labour which the cattle in France give. We possess in all about two millions of oxen used chiefly for work; and among the cows there are many also which work in the plough. If, like the English, we had nearly everywhere dispensed with the working of oxen, we should have been obliged to replace them by horses, and these horses would have involved an expense representing the actual value of the labour of the horned cattle. Valuing this labour at about 200 francs (£8) per team, would give an annual sum of two hundred millions to put to the credit of our race of cattle.

The produce of cattle in the two countries may therefore be reckoned in round numbers as follows, exclusive

the report of a Commission appointed by the Crown in November 1849, to inquire into the state of Smithfield Cattle Market, it was shown on satisfactory evidence that the number of cattle sold in that mart alone amounted to 247,000 in the previous year. These are variously assumed as producing from £16 to £18 each, showing an average total value of £3,853,000; but as the consumption of butcher-meat in London is otherwise made up from the dead market, to the extent, it is calculated, of nearly three-fourths of the whole, it may be fairly estimated that the value of cattle consumed annually in London alone amounts to not less than £4,816,000—or thus, to what appears to be nearly a fourth part of the amount generally set down as the total value of the cattle consumed in the whole of the British empire. Again, the evidence produced before the above Commission tended to show that the value of butcher-meat *of all kinds* annually consumed in the metropolis, with a population of 2,360,000, was upwards of £10,000,000; while the highest estimate which we have seen—that of Mr Spackman—gives the annual value of sheep and cattle slaughtered in the whole United Kingdom, with a population of 27,720,000 (in 1851), at £45,000,000. We can scarcely think, though no doubt it must be greatly superior, that the proportion of animal food devoured in London can be so large in reference to that consumed by the rest of the inhabitants generally.—J. D.

of the value of the offal and manure on both sides, as these should about balance each other, and valuing the kilogramme of meat at 1 franc (5d. per lb.) :—

	France.		
Milk, . .	100,000,000	francs, or	£4,000,000
Meat, . .	400,000,000	„	16,000,000
Work, . .	200,000,000	„	8,000,000
Total, .	700,000,000	„	£28,000,000

Equal to 70 francs per head, and 14 francs per hectare (55s. per head, and 4s. 9d. per acre).

	United Kingdom.		
Milk, . .	400,000,000	francs, or	£16,000,000
Meat, . .	500,000,000	„	20,000,000
Total, .	900,000,000	„	£36,000,000

Equal to 110 francs per head, and 30 francs per hectare (85s. per head, and 10s. per acre). In England proper this produce may be reckoned at about 50 francs per hectare.

These figures are verified by a fact extremely simple and easy to prove—namely, the average price of the animals in the two countries. Generally speaking, the current price of an animal is a sufficiently correct criterion of the profit which the purchaser expects to derive from it; now it is invariably the case that the average value of horned animals in England is much above what it is in France. It is not even necessary to go so far as England to ascertain a difference of the same kind. We have in France two districts—the one where they do not work the cattle, and the other where they do. If we take the average values in these two quarters, we find that in the former it is very much above what it is in the latter; and yet the art of rearing cattle for butcher-meat only is still scarcely known in France. What would that be

if it had reached the point attained in England at the present day ?

I am aware that the substitution of milking and butcher-meat races for working animals is not always practicable. I am not finding fault with those portions of our territory where cultivation is carried on with oxen, or even cows. I recommend no sudden and rash change ; I simply confine myself to stating facts as they exist, and believe I have demonstrated that, by the sole fact of the almost entire abandonment of tillage by oxen, the soil of Britain, even including Scotland and Ireland, has in cattle reached a production double that of ours. Such in agriculture is the power of a correct principle, when practically carried out.

The other species of domestic animals are horses and pigs. As regards horses, the pre-eminence of the English breeders has long been recognised. We possess in France about three millions of horses of all ages, or about six head for every one hundred hectares ; in England, Scotland, and Ireland, these are reckoned at two millions, equal also to about six head per one hundred hectares ; but our three millions of horses cannot be valued at more on an average than 150 francs each, making a total value of four hundred and fifty millions ; whereas the two millions of English horses are worth an average price of 300 francs, equal to a capital of six hundred millions. It is true that, in order to make a complete comparison, there must be added to our capital in horses the value of our mules and asses, which official statistics set down at eighty millions, though probably nearer one hundred ; but even with the addition of this latter sum we are still behind, although the extent of our soil should secure for us a great superiority.

It will perhaps be said that the average value of our

horses has been understated in the preceding estimate, and that of the English increased. Such an assertion I consider without foundation. Doubtless all the English horses are not race-horses; if they were, they would be worth more than 300 francs. The value of the English race-horse is quite fanciful, but it is taken upon a small number; and so far it is in many respects justified by the high value which the English set upon everything capable of improving their breeds. It is entirely owing to the enormous sums paid for first-rate stallions that the breeders of Great Britain have been enabled to improve their common horses in the way they have done. Each species of domestic animal has its special use—that of the horse is for purposes where strength combined with speed are required. The English seek to develop these two properties in their horses, although the first expense is considerable; and, in the long run, it is found that power and speed together do not cost them more than it does us, because they concentrate as much as possible their means of production and their care upon choice individuals, in place of lavishing these on animals of no value.

Besides their celebrated saddle-horses, they have breeds for draught, which are equally valuable. Such, for example, are the plough horses, the best of which perhaps come from Suffolk. We have already observed that tillage with horses has been generally substituted by the English for that of oxen: they thought, and with reason, that the quicker action of the horse made its work more productive. But they have done more; they have even substituted horses for men wherever manual labour—the most expensive of all—could be replaced by a machine set in motion by horse-power. The amount of agricultural work executed in England by horses is therefore very

considerably more than in France; and the number of these animals employed in agriculture has not been increased in proportion. The reason of this is, that their teams, more choice and better kept than ours, are more vigorous and active.

The brewers' horses, and those used in coal waggons and for other heavy draughts, are celebrated for their strength and bulk. The best fetch very high prices. It is the same with the carriage horses: the breed of Cleveland bays from Yorkshire is reckoned one of the most perfect which exists for carriage work.

As for the race-horse, and his rival the hunter, everybody knows by what a combination of efforts the English have succeeded in producing and keeping up these superior breeds. They are productions of human industry, real works of art, obtained at great expense, and designed to gratify a national passion. It may be said, without exaggeration, that all the wealth of Britain seems to have no other object than the keeping up of studs from whence these privileged creatures emanate. A fine horse constitutes with everybody the ideal of fashionable life; it is the first dream of the young girl, as it is the latest pleasure of the aged man of business: everything which relates to the training of saddle-horses, to racing, hunting, and all exercises which display the qualities of these brilliant favourites, is the great business of the whole country. The common people, as well as the wealthier classes, take great interest in these matters, and the day on which the Derby is run at Epsom is a general holiday. Parliament does not meet, no business is transacted, the eyes of all England are directed to that course where a few young stallions run, and where millions are gained or lost in a few minutes.

We are still far from this national infatuation, and

certainly it is not because our own breeds are without value; they are, on the contrary, possessed of natural merits, which art alone has communicated to the English horses. The truth is, that production with us is never below consumption; but what is needed for the improvement of our breeds is, that we learn to pay a price for good horses. This is the great secret. Nothing is more expensive to produce than a good horse. As long as our first object is cheapness, handsome and good horses will be the exceptions with us, although it would be an easy matter to multiply them. Our Percherons, our Boulonnais, our Limousins, Bretons, and Béarnais, afford already excellent types, which might be easily spread and improved if our breeders could obtain sufficient remuneration for their trouble.

English pigs, on an average, are not larger than ours, but they are much more numerous, and are killed younger —exemplifying always the great principle of precocity, contended for by Bakewell, and applied to all kinds of animals destined for food. England alone feeds as many pigs as the whole of France; those of Scotland and Ireland are over and above, and very few of these animals are kept alive beyond a year. They are all of breeds which fatten rapidly, and whose shapes have been improved for a lengthened period. Official statistics make the annual production of pork in France two hundred and ninety millions of kilogrammes. This figure must be much under the real amount, a great many of these useful animals being killed and consumed in country households, without any account of them being taken; but even extending it to four hundred millions, the United Kingdom produces double: a superiority, again, which causes no surprise to any one who has witnessed with what ability the piggeries of our neighbours are con-

ducted. Farms where pigs are fattened by hundreds are not rare, and almost everywhere they figure among the principal branches of farm revenue.

Such, at a rough estimate, are the advantages obtained by British agriculture in the rearing of domestic animals. It is true that France retaliates in another branch of animal products, which is hardly reckoned in England, and is very considerable with us—that of the poultry-yard. The English rear few fowls, the dampness of their climate being unsuitable for it; and notwithstanding the endeavours which wealthy amateurs have been making for some time past, this occupation has hitherto obtained little favour. The most to which statistics bring the annual value is twenty-five millions (one million sterling) derived from this source; whilst in France the annual production of eggs alone is estimated at one hundred millions, and that of all kinds of fowls at an equal sum. A large portion of the population live upon poultry, especially in the south, and this addition partly makes up for what we lack in butcher-meat; but while rendering every justice to the real importance of this too often neglected resource, we cannot shut our eyes to the fact that it but imperfectly makes up the deficiency.

We shall see, in treating of the crops, what are at once the causes and consequences of this large animal production.

CHAPTER IV.

THE CROPS.

The object of all cultivation is, to produce the greatest possible quantity of human food upon a given surface of land: to attain this object, several widely different means may be adopted. French agriculturists are greatly prepossessed in favour of the production of cereals, because these serve directly for the food of man; but it is different in England, for, owing to the nature of the climate, and upon a careful consideration of the subject, agriculturists there have been induced to take a more circuitous course, which does not arrive at cereals until after having passed through other crops, and it is found that this indirect way is the best.

One great drawback attends cereals generally, which has not been sufficiently appreciated by the French cultivators: they exhaust the soil which bears them. This defect is scarcely perceptible upon certain favoured lands, capable of producing wheat almost uninterruptedly; it may be of little consequence, also, where land is plentiful and population scanty, for there corn need be grown only on the best soils, or that which is inferior may be allowed to rest for several years before being again brought under the plough; but as population increases, a different system must be adopted. If attention is not given to restoring the fertility of the soil, in proportion to its

exhaustion by cereal crops, a period arrives when the land, too often required to bear corn, refuses to do so. Even where climate and soil are most favourable, the old Roman system, which consisted in growing corn one year, and leaving the land fallow the next, is found ultimately to be insufficient; the soil ceases to produce crops of any value.

In northern latitudes, it is found that the land becomes sooner exhausted under cereals than in the south: this inferiority in their soil led the English to the knowledge of one of its valuable properties. The impossibility of taking from their land as many white crops as were elsewhere produced, set them at an early period to discover the causes, and to effect a remedy for this exhaustion. At the same time, their soil presented one resource, which less naturally offers itself to southern agriculturists; namely, the spontaneous growth of an abundant grass for cattle. These two facts combined to produce their entire agricultural system. Animal manure being the best agent for renewing the fertility of the soil after a cereal crop, they concluded that they ought to apply themselves especially to the feeding of a large number of cattle. Besides that butcher-meat is an article of food more required by the inhabitants of northern than those of southern latitudes, they perceived in this large animal production the means of increasing, by the quantity of manure, the richness of the soil, and so augmenting their production of corn. This simple calculation succeeded, and since they adopted it, experience has led them to apply it every day more and more.

At first the English contented themselves with natural pastures for their cattle, and upon this system one-half

of the land remained in pasture, the other half being divided between corn and fallows. But by-and-by, not satisfied with this proportion, the idea of artificial grasses and roots suggested itself—that is to say, the cultivation of certain plants exclusively intended for the food of cattle—and by so much was the domain of fallows reduced. After a time the breadth of cereals itself was diminished, and now, including oats, it occupies only a fifth of the soil; and what proves the excellence of this system is, that in proportion as cattle increase, the return from corn increases also; though narrowed in extent, the harvests are larger, thus effecting for agriculture a two-fold benefit.

The decisive step in this direction was taken sixty or eighty years ago. At the time when France was occupied with the sanguinary struggles of her political Revolution, a less noisy and more salutary revolution was being accomplished in English agriculture. Another man of genius, Arthur Young, completed what had been begun by Bakewell. While the one showed how the most was to be made out of cattle, the other taught how the largest possible number of them could be fed upon a given extent of land. Extensive proprietors, whose efforts have been rewarded with large fortunes, favoured the diffusion of these ideas, by putting them into practice with success. It was then that the famous four-year course, known as the Norfolk rotation, from the country where it arose, began to spread. This system, which, with some variation, prevails at the present day in England, has completely changed the character of the most ungrateful land of that country, and everywhere created agricultural richness.

I will not here repeat the well-known theory of this rotation. Everybody nowadays is aware that most forage

plants derive from the atmosphere the principal elements of their growth, while they give to the soil more than they take from it; thus both directly, and by their conversion into animal manure, contributing in two ways to repair the mischief done by cereals and exhausting crops generally; one principle, therefore, is, that they should at least alternate with these crops: in this consists the Norfolk rotation. Since the commencement of the present century, great exertions have been made by eminent agriculturists in France to introduce this beneficial practice, and not without some effect. But the English have greatly outstripped us; and therefore this precious fertilising capital, which no good agriculturist should lose sight of, has in their hands been constantly accumulating.

Nearly half the cultivated soil has been maintained in permanent grass; the rest, composing what is called the arable land, is divided into four fields of operation, according to the Norfolk rotation—1st year, roots (chiefly turnips); 2d year, spring corn (barley and oats); 3d year, artificial grass (chiefly clover and rye-grass); 4th year, wheat.

The practice of late has been to add another year to the course, by allowing the artificial grasses to retain possession of the land for two years, thus making the rotation quinquennial. For example, upon a farm of a hundred and seventy-five acres, seventy-five would be in permanent grass, twenty in potatoes and turnips, twenty in barley and oats, twenty in artificial grass of one year, twenty in artificial grass of the second year, and twenty in wheat. In those parts of the country most favourable to herbaceous vegetation, the proportion of grass land is increased, and that of corn reduced; and where the soil is not so suitable for roots and grass, beans

are substituted for turnips, and the breadth of corn is extended in the place of other crops; but, upon the whole, these exceptions compensate the one for the other, at least in Great Britain — in Ireland the whole system is different.

Upon the whole, deducting eleven millions of uncultivated hectares contained in the British Isles, the twenty millions of cultivated hectares are divided nearly as follows :—

	Hectares.
Natural pasture,	8,000,000
Artificial grasses,	3,000,000
Potatoes, turnips, beans,	2,000,000
Barley,	1,000,000
Oats,	2,500,000
Fallows,	500,000
Wheat,	1,800,000
Gardens, hops, flax, &c.,	200,000
Wood,	1,000,000
Total,	20,000,000 *

In France we have also eleven millions of hectares uncultivated out of fifty-three; the remaining forty-two millions being divided as follows :—

	Hectares.
Natural meadows,	4,000,000
Artificial ditto,	3,000,000
Roots,	2,000,000
Oats,	3,000,000
Fallows,	5,000,000
Wheat,	6,000,000
Rye, barley, maize, buckwheat,	6,000,000
Other crops,	3,000,000
Vineyards,	2,000,000
Wood,	8,000,000
Total,	42,000,000

A comparison of these two tables shows the difference between the two agricultures.

* This is a distribution of the soil of the British empire in many respects differing from that given by any of our statists, so far as we have seen; but as

At first it appears that France has the advantage over the United Kingdom in the proportion of uncultivated to cultivated lands; but then the lands left waste by our neighbours are, for the most part, incapable of cultivation; they lie almost entirely in the Scotch Highlands, the north of Ireland, and in Wales; while most of our waste lands are susceptible of cultivation. We have, besides, more wood than our neighbours; and, adding our forest grounds to the uncultivated land, we find nineteen millions of hectares out of fifty-three excluded from cultivation, properly speaking: this brings the proportion to nearly the same in both cases. Owing to the abundance of cheap fuel which their coal supplies, the English have been enabled to get rid of the extensive woods which once covered their island, and by this means to redeem their inferiority in other respects: few vestiges of their ancient forests now remain, and these are every day threatened with destruction.

On the one side, then, the area under cultivation consists of nineteen millions of hectares, and on the other of thirty-four. At first sight, we find that out of the nineteen millions of English hectares, fifteen are devoted to the growth of food for live stock, and at most four for that of man. In France, nine millions of hectares are appropriated to ameliorating crops, whilst the exhausting crops occupy double that surface: the extent of fallows, again, is enormous, and in their present state they cannot be of much service in renewing the fertility of the land. An examination into details will only confirm the truth of what is here presented.

our best authorities in this matter differ materially, and it is well known that no data commensurate with the scope of the inquiry, or of any reliable nature, have ever yet been obtained to warrant a just estimate of so important a phenomenon, we hold that the above, upon the whole, may be found as near the truth as any that has been hitherto hazarded.—T.

First in order come the natural meadows, estimated as covering four millions of hectares with us, and eight in the British Isles—here (in France) less than one-eighth, there, nearly one-half of the cultivated land. It is true that the English meadows consist principally of such as are pastured only, but these pastures are as productive as our mown meadows.

This extent of pasture is certainly one of the most striking features of British farming. Comparatively little hay is made in England, the winter food of cattle being chiefly obtained from the artificial meadows, besides roots, and even corn. Of late, new systems, of which I shall speak by-and-by, tend to the substitution of stall-feeding even in summer, in place of the old national custom ; but these trials are still, or were, at any rate, five years ago, only exceptions to the rule. The almost universal practice is to confine cattle as little as possible. Three-fourths of the English meadow-lands are grazed ; and as one-half of the artificial grasses are so also, especially in the second year ; as turnips, too, are to a great extent eaten off the ground by sheep ; and, lastly, as the uncultivated lands cannot be turned to account except in the shape of commons, two-thirds of the whole soil are thus given up to live stock. In this consists the peculiar charm of the British fields. With the exception of Normandy, and some other provinces where the same practice prevails, our territory seldom presents that smiling aspect which England does, with its greensward depastured with animals at large.

The attractive beauty of this landscape is enhanced by the picturesque effect of the quickset hedges, often interspersed with trees, which divide the fields. The existence of these hedges is strongly assailed in the present day, although hitherto they have been considered as indispen-

sable to the general system of agriculture. Each field being pastured in its turn, it is convenient to be able, in a manner, to pen the cattle, so as to leave them without any further care. It appears strange to us, whose habits are so different, thus to see cattle, and especially sheep, left entirely to themselves, on pastures sometimes far from human habitations. To account for such a state of security, it must be recollected that the English have destroyed the wolves in their island; that they have, by severe laws under a system of rural police, protected property against human depredations; and, finally, that they have taken care to make their fields secure by means of fences. These beautiful hedges, then, are thus a useful defence as well as an ornament, and it is only surprising how there should be any wish to do away with them.

The system of pasturage has many advantages in the eyes of English farmers: it saves manual labour, which with them is no small consideration; it is favourable—at least, so they think—to the health of herbivorous animals; it admits of turning to account lands which otherwise would give but a small return, and which, in the course of time, are improved by the deposits of the cattle; it supplies a food always springing up afresh, and the sum of which is found, in the long run, to equal, if not to exceed, what would have been obtained by the scythe. Considerable importance, therefore, is attached to having on every farm a sufficient extent of good pasture; even the mown meadows are often submitted to one year of pasturing between two of hay cropping. Whilst our pastures are, generally speaking, neglected, theirs, on the contrary, are carefully attended to; and any one who has but a slight knowledge of this most attractive kind of culture, can appreciate the immense difference

that exists between a wild uncultivated pasture, and one which has received proper care.

It may be confidently asserted, that the eight millions of hectares of English meadows give three times as much food for cattle as our four million hectares of meadows and five million hectares of fallow put together. The proof of this is to be found in the money value of these different kinds of lands. The English meadows, whether for mowing or otherwise, sell on an average at about 4000 francs per hectare, or £60 per acre; and some are worth 10,000, 20,000, and even 50,000 francs. With us the good grass-lands of Normandy are the only ones we have which may compare with any of these prices: our meadows are worth, on an average, about three-fourths that of the English; and as for our fallows, they are greatly inferior. Nowhere has the art of improving meadows and pasture-lands been carried to such an extent as in England: they have been rendered sound by draining, fertilised by irrigation, judicious manuring, subsoil-ploughing, clearing off stones, embankments, improvements of every sort for the encouragement of nutritious plants and the destruction of weeds, which spread so easily on grass-lands. Nowhere is the expense of creating and maintaining less grudged, when the object is to carry out some improvement which may be thought beneficial. Such instances of skill and intelligence, favoured by climate, have been productive of marvellous results.

Next come roots and artificial grasses. The roots universally cultivated in England are potatoes and turnips. Beetroot, so common in France, is very little cultivated as yet on the other side of the Channel, and makes very little progress. Potatoes were in great favour before the appearance of the disease. It is well known that the quantity of these consumed by the population of Eng-

land is much greater than in France; in addition to which, immense quantities are appropriated to the feeding of cattle. But the great characteristic of English rural economy, and that which in some degree may be considered the pivot of the whole system, is the turnip crop. This crop, which with us covers but a few thousands of hectares, and is little known except in our mountainous provinces, is reckoned in England the surest indication, the most active agent, of agricultural progress. Wherever it is introduced and thrives, fertility follows. Through its means, ancient moors have been converted into fertile lands. The value of a farm is most frequently estimated by the extent of ground which can be profitably devoted to this crop. It is no uncommon thing, in going through the country, to see spaces of hundreds of hectares of turnips. Their brilliant verdure is everywhere to be seen at the proper season.

Turnips were anciently cultivated in Holland, and passed into England towards the end of the seventeenth century, along with the financial and political institutions brought over by William III. Lord Townsend acquired a great name in the reign of George II. for having done much towards their propagation, for these services are not forgotten in England.

The turnip crop is the starting-point of the Norfolk rotation; upon its success depends that of the rest of the course. Not only is it capable of insuring the succeeding crops, from the abundance of manure given by the quantity of cattle it can feed; not only does it produce much butcher-meat, milk, and wool, from the quantity of food it supplies for all the domestic animals; but it further serves to clean the land, by the frequent dressings it requires, and by the nature of its growth. Neither is there any cultivation—not even that directly

producing wheat—which has been brought to such a state of perfection. The English farmers spare no pains upon the turnip crop; for it they reserve almost all their manures, the most thorough weedings, and the most assiduous cares. On an average they obtain from five to six hundred metrical quintals * of turnips per hectare; or the equivalent of a hundred to a hundred and twenty metrical quintals of hay, and sometimes as much as double this. Turnips require a light soil and wet summers, conditions which render them so suitable for successful cultivation in England.

It is easy to understand how such a resource, which has but few analogies in France, would add to the produce of the natural pastures. Beans take the place of turnips in the rotation on certain soils; and on all, artificial grasses complete the system.

French official statistics estimate the extent of artificial grasses at only 1,500,000 hectares. But, considering the constant progress which this kind of cultivation is making among us, I consider this statement no longer correct, and have, accordingly, set it down at double—that is to say, three millions of hectares—reducing the fallows to an equal extent. With this addition, however, we are still much behind the English; for, putting Ireland and Scotland out of the question, they have upon the fifteen millions of hectares in England the same extent of artificial grasses as we have upon fifty-three. Our artificial grasses are quite as good as theirs, for their soil being little suited for lucern, they have little besides clover and rye-grass; and however good the produce of these crops may be, it does not surpass that of the superior kinds which we possess: to say that they are equal is saying a good deal. For some time past the

* Metrical or new measurement quintal=100 kilos, or nearly 221 lb.

English have obtained remarkable results from Italian rye-grass.

The remaining crop used for forage is oats. France sows about three millions of hectares of oats every year, while upon a less extent in the British Isles a much superior harvest is gathered. The average production of oats in France, deducting seed, is eighteen hectolitres * per hectare (about twenty bushels per acre); in the United Kingdom it is about twice as much, or five quarters per acre, and sometimes even as much as ten. We find differences as great in France also, when comparing those districts where the cultivation of oats is well understood, and well suited to the soil, with others where such is not the case: moreover, of all the cereals, it is the one which naturally thrives best in northern climates. The Scotch, as a nation, had at one time scarcely any other food; from which circumstance Scotland got the name of the Land of Cakes, just as Ireland, in the same way, came to be called the Land of Potatoes.

Thus upon a total surface of thirty-one millions of hectares, reduced to twenty by the uncultivated lands, the British Isles produce much more food for cattle than the whole of France, with twice the extent. The quantity of manure, therefore, is proportionably three or four times greater, independently of the animal products which go directly for consumption, and yet this mass of manure is not considered sufficient. Everything fitted for increasing the fertility of the soil—bones, blood, rags, oil-cake, the refuse of manufactories, all kinds of animal and vegetable waste, minerals considered as possessing fertilising properties, such as gypsum, lime, &c.—is assiduously collected and put into the ground. British shipping go in search of additional supplies to all parts of the world;

* A hectolitre is $2\frac{3}{4}$ bushels.

and guano, that rich material, is imported by shiploads from the most distant seas. Agricultural chemistry is constantly at work to discover either new manures, or which are the best suited for particular crops ; and in place of despising these researches, the farmers encourage them by their active co-operation. In the expenditure of every farm a good round sum figures every year for the purchase of fertilising materials ; the more the farmer can afford to lay out in these, the more does he consume. The sale of these additional manures has given rise to a large trade.

Land requires not only manure and fertilisers, but it must also be dug, pulverised, levelled, weeded, drained, and worked in every direction, so that the wet may pass through it without lodging ; and be rendered pervious to atmospheric gases, in order that the roots of useful plants may have free scope to strike down and extend themselves easily. A host of implements have been invented in order to facilitate these various operations. A pretty correct estimate may be formed of the immense importance attached to the manufacture of agricultural implements in England, and the great demand for them, by the space they occupied at the Great Exhibition : there were nearly three hundred exhibitors in this class, from all parts of the kingdom, and some among them, as the Garretts and Ransomes in Suffolk, employ thousands of workmen, and every year execute orders to the value of millions of francs. These machines economise labour to a wonderful extent, and supply the place of a large number of hands.

All these operations and expenses contribute mainly to the production of two cereals—barley, from which the national beverage is produced ; and the queen-plant, wheat.

Upwards of a million of hectares are sown in barley every year; this is about as much as is grown in France, where this cereal does not hold the same relative importance; but, as in the case of oats, the average production is about twice as great as with us. In France the yield is fifteen hectolitres—while in England it is thirty, or a little more than four quarters per acre. More than one-half of this crop is used in the manufacture of beer (and spirits). The duty collected on malt proves that fourteen to fifteen millions of hectolitres of barley are thus annually employed; the other moiety affords an additional resource for the feeding and fattening of live stock, especially pigs.* Human consumption takes off a small quantity, as it does of oats; but the use of these coarser articles of food is falling off every day.

Besides barley and oats, the English formerly used a good deal of rye as food. Rye, in fact, is, along with the spring cereals, the grain best suited for the short summers of the north. All the north of Europe cultivates and consumes rye only. In England, however, it has almost entirely disappeared, being now scarcely ever grown excepting for green fodder in spring; and its price, which is generally very low, is quoted in the market only about seed-time.† The quantity imported is insignificant. Most of the soils which formerly grew only rye, now grow wheat; and those which were absolutely unfit for it have been turned to other uses. The English rightly

* This, we fear, is not altogether correct. About five million quarters barley, on an average, are consumed as malt, besides upwards of one million quarters distilled as *raw* grain. A large quantity goes otherwise for human food, and little comparatively for feeding purposes.—J. D.

† Rye is, no doubt, very sparingly cultivated in England, and is much out of favour where the soil is suitable for any other cereal. Still it is scarcely so rare as the above remarks would lead one to infer, as it is generally to be found in our markets, and in some quantity is used for distillation—the price being by weight equal to that of barley.—T.

contend that this crop, which occasions as much work and requires almost as much manure as wheat, for greatly inferior results, does not merit that consideration which it obtains throughout the rest of Europe, and even in France. This is another of those correct principles in rural economy which suffice to change the agricultural aspect of a country. The abandonment of rye may be considered in the same light as the abandonment of labour by oxen, the increase in the number of sheep, and all the other parts of the English system.

Rye is still cultivated in France to the extent probably of about three millions of hectares. This includes half the lands sown with wheat and rye mixed. In general it gives a miserable result, yielding no more than five or six fold, and barely paying the expenses of cultivation. It would be well to renounce it entirely; but this is not always practicable. The abandonment of rye would not of itself be sufficient: it is necessary to be in a position to produce something else with success; and all are not in a position to force nature. To attain their present production of wheat, the English have been obliged to do violence to their soil and climate. The use of lime as a stimulant has been their chief aid; and similar effects, by the same means, have been produced in many parts of France. At the same time, we must bear in mind this other principle which the English have laid down, that if it is scarcely ever advantageous to grow rye, it is not profitable to grow wheat excepting where circumstances are favourable. Ten hectares in good condition are worth more, for the production of corn, than twenty or thirty partially improved and badly worked.

While nearly the fourth part of our soil is under cereal crops for human consumption, less than one-sixteenth of

the British territory—say 1,800,000 out of 31,000,000 hectares—is in corn ; at the same time, whilst out of our eleven millions of hectares, five millions bear inferior grain, not including barley and oats, the 1,800,000 English hectares produce wheat only. Deducting seed, the whole grain production of France is estimated at seventy million hectolitres of wheat, thirty of rye, seven of maize, and eight of buckwheat. That of the British Isles may be reckoned at forty-five million hectolitres of wheat without any rye.

With us the average production is thirteen and one-half bushels of wheat and eleven of rye per acre, deducting seed. Adding to this maize and buckwheat, and dividing the whole by the number of hectares sown, the average result for each acre is rather more than seven bushels of wheat, about three bushels of rye, and a little more than one bushel of maize or buckwheat—making a total of about twelve bushels per acre. In England the production is twenty-eight bushels of wheat—say more than double in quantity, and in money value three times as much. This superiority is certainly not to be attributed, as in the case of the natural and artificial meadows and roots—and, to a certain extent, also with oats and barley—to the soil and climate, but to superior cultivation, which shows itself chiefly in limiting the wheat crop to the extent of land rendered fit for its production.

As to maize and buckwheat, in place of being causes of inferiority, they ought to be sources of wealth ; for these two grains are endowed by nature with a much greater power of reproduction than the other two ; and what they yield with us in certain parts, shows what they may be made to produce elsewhere.

Scotland and Ireland are included in the above estimate ; but taking England by itself, the results are much

more striking. That small country, which is no larger than a fourth of France, alone produces thirteen million quarters of wheat, six of barley, and twelve of oats. If France produced in the same ratio, her yield, deducting seed, would be fifty million quarters of wheat, and seventy of barley, oats, and other grain—equal to at least double her present production; and we ought to obtain more, considering the nature of our soil and climate, both much more favourable to cereals than the soil and climate of England. These facts verify this agricultural law—that, to reap largely of cereals, it is better to reduce than to extend the breadth of land sown; and that by giving the greatest space to the forage crops, not only is a greater quantity of butcher-meat, milk, and wool obtained, but a larger production of corn also. France will achieve similar results when she has covered her immense fallows with root and forage crops, and reduced the breadth of her cereals by several millions of hectares.

In this consists the whole system of English farming. Nothing is more simple. A large extent of grass, whether natural or artificial, occupied for the most part as pasture; two roots—the potato and turnip; two spring cereals—barley and oats; and a winter one—wheat; all these plants linked together by an alternating course of cereals or white crops with forage or green crops, commencing with roots or plants which require to be hoed, and ending with wheat: this is the whole secret. The English have discarded all other crops, such as sugar-beet, tobacco, oleaginous plants, and fruits; some because the climate is unfavourable, others on account of their too exhausting nature, or because they do not like unnecessarily to complicate their means of production. Two only have escaped this proscription; these are the hop in England and flax in Ireland; both are very successfully pro-

duced in their several localities. The value of the flax crop in Ireland is £15 per acre, but its extent is only 100,000 acres.* The hop yields a still higher return, but it covers only about 50,000 acres.

Gardens and orchards occupy a relatively much less space in England than in France, and their produce is much inferior in value to ours. The English are not great consumers of fruit and vegetables, and they are right ; for both the one and the other, with them, are very tasteless. All their eating as well as production is confined to a few articles obtained in great abundance.

As in the case of animal products, France can show a certain number of crops almost unknown among our neighbours, and these extra productions with us have to be added to those we both have in common. Such, for instance, is the vine, a source of wealth belonging especially to our soil, covering not less than five millions of acres, and producing at least £4 the acre ; then again, rape, tobacco, sugar-beet, madder, the olive, and mulberry ; and, finally, two and a half millions of acres of gardens and orchards, from which fruit, vegetables, and flowers are obtained in great abundance. The sum of these productions amounts in annual value to at least a milliard (£40,000,000).

These are unquestionable sources of wealth, which partially redeem our inferiority, and may do so to a still greater extent, for there is no limit to their production.

* The flax crop in Ireland has of late years attained to about 140,000 acres; in 1853 it took a rapid rise to 175,000.—T.

Thirteenth Annual Meeting of the Royal Flax Society of Ireland.

1848,	53,863	acres	under cultivation,	value £15 per acre.
1849,	60,314	„	„	„ „
1850,	91,040	„	„	„ „
1851,	138,619	„	„	„ „
1852,	136,009	„	„	„ „
1853,	175,495	„	„	„ „

The diversity of our climate, and, what is more, our national genius, which naturally aims at quality in variety, as that of England seeks quantity in uniformity, give us promise of immense progress in those crops which, to a certain extent, are dependent on art. We have not yet shown all we can do in this respect; our labourers, like our mechanics, by means of improvements and novelties, can compensate for our deficiencies in amount of production. The art of horticulture, affording as it does such large returns upon a small extent of land, would, by extension, add considerably to our wealth; and the same may be said of improved methods in the fabrication of wines and brandy, as well as in the production of sugar, silk, oil, &c.

Still, it is impossible to be blind to the fact that, as matters stand, the English, with their two or three crops upon a large scale, produce, by the universality and simplicity of the means they employ, much superior results in the aggregate—results which we also obtain in particular parts of France where the same system is followed. Those of our departments most resembling England in the nature and distribution of their crops, are those also which attain, upon the whole, the best returns; and if in some parts they are below the English average, it is because the proportion of exhausting crops there is still too great, notwithstanding the progress made by means of the ameliorating crops during the last fifty years.

CHAPTER V.

THE GROSS PRODUCE.

We now come to value the total production of the two agricultures. This valuation is no easy task, especially when it becomes a question of comparison.

Even the best statistics contain repetitions. Thus, in the statistics for France, animal products figure three times—first, as return from meadows and pastures, then as return from live animals, and, lastly, return from slaughtered animals. These three form but one: it is the return from slaughtered animals that must be taken, adding to it the value of the milk for the cows, that of the wool for the sheep, and the cost of the horses reared up to the age when they are usually sold—say three years old; all the rest is but a series of means of production, by which we arrive at the real produce—namely, that which serves for human consumption, whether upon the farm itself, or beyond it. It is no less incorrect to take into account the quantity of grain necessary for renewing seed. Seed is not a product, but a capital; the land does not give it until after it has received it. Lastly, it is out of the question to include, as do some statistics, the value of straw and manure. Manure, with one important exception, which I shall mention by-and-by, is evidently a mean of production; and as for straw, it constitutes a product

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only in so far as it is used beyond the farm—for example, as food for horses employed in other ways.

Everything consumed on the farm itself as a mean of production—such as the food of working animals, and even of animals generally, litter, manure, seed—all ought to figure in the means of production, and not as products. That only is really a product which may be sold or given in wages. In this respect English statistics are much better compiled than ours;* for, economical notions being more diffused in England than with us, they keep distinct what ought to be kept separate, and the real products—the exportable commodities—are reckoned apart from the means of production. It behoves us more especially to do the same, since, the means of production being a larger item with our neighbours than with us, the comparison would act still more disadvantageously for us were we to include these in the estimate.

This first difficulty being removed, we encounter others. French proprietors complain of errors and omissions in the official statistics; these imperfections no doubt exist, but they are not of such great importance as is believed. I have already pointed them out, and attempted to rectify them. They are not the most serious difficulty; it is the difference of prices which is the real stumbling-block. Nothing is more variable than prices, whether from year to year on the same spot, or in different districts of the same territory: much more is this the case when the question involves the placing in juxtaposition countries so dissimilar. In France, anomalies are numerous; country prices are not those of the general market; Provence prices are not those of Normandy; the prices of 1850 are not those of 1847. It is precisely the same on

* That is, facts, so far as known, are better weighed and applied; but, as before observed, we have no official agricultural statistics.—T.

the other side of the Channel; and when, to escape this difficulty, recourse is had to averages, it is found that the general average of the United Kingdom is not the same as the general average of France.

Notwithstanding these difficulties, it is not absolutely impossible to form at least an approximate idea of the aggregate values annually accruing from agriculture in the two countries. Deducting what are only means of production, supplying as far as possible the omissions in official statistics, and carrying back prices to the average of years anterior to 1848, we find that the annual value of the produce of French agriculture, before 1848, was about five milliards, divided nearly as follows :—

ANIMAL PRODUCTS.	Francs.
Meat (1 milliard of kilog., at 80 c.),	800,000,000
Wool, hides, tallow, offal,	300,000,000
Milk (1 milliard of litres, at 10 c.),	100,000,000
Poultry and eggs,	200,000,000
400,000 horses, asses, and mules, 3 years old,	80,000,000
Silk, honey, wax, and other produce,	120,000,000
Total,	1,600,000,000
VEGETABLE PRODUCTS.	
Wheat (70,000,000 of hectolitres at 16 fr.),	1,100,000,000
Other cereals (40,000,000 hectolitres at 10 fr.),	400,000,000
Potatoes (50,000,000 hectolitres at 2 fr.),	100,000,000 *
Wine and brandy,	500,000,000
Beer and cider,	100,000,000
Hay, straw, and oats, for non-agricultural horses,	300,000,000
Flax and hemp,	150,000,000
Sugar, madder, tobacco, oils, fruit, and vegetables,	500,000,000
Wood,	250,000,000
Total,	3,400,000,000

Say, on an average, for the fifty millions of hectares

* The total production is one hundred millions of hectolitres, but I have supposed the half consumed by cattle. I have also cut off five millions of hectolitres of inferior cereals, as maize and buckwheat, for the consumption of fowls and other animals; it ought to amount to considerably more.

of our soil—deducting three millions of hectares occupied by roads, rivers, towns, &c.—a gross production of 100 francs per hectare (32s. per acre), cultivated and uncultivated lands together. The minimum is to be found upon the uncultivated lands and forest grounds, which, taking the one with the other, probably yield from 15 to 20 francs: the maximum is in the gardens, the most esteemed vineyards, the lands bearing flax, hops, mulberry, tobacco, and madder, the gross produce of which rises as high as 1000, 2000, 3000 francs, and even more; but striking out these two extremes, we find for the greater portion of the cultivated land—say about thirty-two millions of hectares—the general average of 100 francs per hectare.

Dividing France into two equal portions, north and south, we find an average gross production of 120 francs for the northern division, and 80 for the southern.

This disproportion is the more to be regretted, since the southern region ought to be the richest. In some localities, as in the environs of Orange and Avignon, the vineyards of Cognac and Bordeaux, the districts producing oil, silk, &c., the returns are magnificent; but the *landes* and the mountains cover a fourth of the soil, and in the greater portion of the remainder farming languishes without capital and without intelligence. The north surpasses the south for the same reason which makes England superior to us—namely, because good farming is there more general.

If we compare the departments one with the other, the most productive prove to be always those of the Nord, Pas-de-Calais, Somme, Oise, and Seine-Inferieure, where the average gross production is 200 francs per hectare. The department of the Nord produces at least 300 francs; but this is the only one so high. On the other hand,

those which produce the least are the Landes, Lozère, Hautes and Basses Alpes, and especially Corsica. The average gross product of these departments may be about 30 francs, and in Corsica 10 at most. The rest of France varies between these two extremes.

A gross total of five milliards of francs had also been attained as the production of the United Kingdom previous to 1848. This amount was apportioned as follows: 3,250,000,000 for England proper, 250,000,000 for Wales, 1,000,000,000 for Ireland, and 500,000,000 for Scotland. Divided by the whole area in hectares, this return gives the following result :—

	Francs.
England, ...	250
Ireland, Lowlands of Scotland, and Wales, .	125
Highlands of Scotland, ...	12
General average, ...	165

All English statistics represent this as still higher. M'Culloch, the most moderate in his valuations, makes the total produce five milliards and a half; others, as Mr Spackman, £250,000,000, or more than six milliards. I have assumed the lowest estimate, and it ought to be further reduced, on account of the difference in prices. It has been already shown, that for milk English prices were double ours, for butcher-meat the difference was 25 to 30 per cent, for cereals 20 per cent. In Scotland and Ireland the difference was not so great, since both countries sold to England. In the aggregate, in order to establish an exact comparison, and to bring the prices of the United Kingdom to the prices of similar articles in France, we must reduce the five milliards by a fifth. We have thus a total of four milliards, which appears to represent pretty exactly the value of British production compared to ours. This result, still so

enormous in comparison, was obtained with a small number of productions: the following shows how they are divided:—

ANIMAL PRODUCE.	Francs.
Meat (1,700,000,000 of kilog. at 80 c.),	1,360,000,000
Wool, hides, tallow, offal,	300,000,000
Milk (two milliards of litres at 10 c.),	200,000,000
300,000 horses above 3 years at 400 fr. each,	120,000,000
Poultry,	20,000,000
Total animal produce,	2 milliards
VEGETABLE PRODUCE.	
Wheat (45,000,000 of hectolitres at 16 fr.),	720,000,000
Barley (20,000,000 of hectolitres at 8 fr.),	160,000,000 *
Oats (15,000,000 of hectolitres at 6 fr.),	90,000,000
Potatoes (200,000,000 of hectolitres at 2 fr.),	400,000,000
Hay and oats for non-agricultural horses,	400,000,000
Flax, hemp, vegetables, and fruits,	170,000,000
Wood,	60,000,000
Total vegetable produce,	2 milliards

The above I believe to be as near the truth as can be ascertained by means of observations so general in their character.

The most striking fact which these figures disclose, besides the disproportion of the results, is the agreement between the vegetable and animal products: whilst in France the vegetable product forms four-sixths of the whole, and the animal two-sixths only,—a state of things which at once shows an exhausting system of cultivation, or at least a stationary one,—in the British Isles the one is equal to the other, which betokens an improving

* The total production of barley is probably thirty millions of hectolitres, but two-thirds only enter into human consumption, the other third being consumed by cattle. I have also taken, as for human consumption, only about a sixth of the production of oats, which ought to be not far short of ninety millions of hectolitres, and of potatoes I have estimated one-half. (The consumption of barley by cattle is very much less than the proportion here stated,—certainly not above one-tenth the entire produce; while that of oats by man may be taken at one-fourth at least, instead of one-sixth.—J. D.)

cultivation. Wood, the lowest item of production, figures on the one side for 250,000,000, and on the other for 60,000,000 only.

But we must not omit to notice that there are two portions of the United Kingdom which, from different causes, show results very much inferior to those of England proper—Scotland, on account of the irreclaimable sterility of the greater portion of her soil; and Ireland, owing to peculiar social and political circumstances. I shall refer to these two portions by-and-by in some detail; in the mean time let us examine England separately, without including Wales, where the soil is scarcely better than in Scotland, and the history of which, in some respects, bears a resemblance to that of Ireland.

England herself produces five-eighths of these four milliards—that is to say, 2,600,000,000 francs—divided as follows :—

OF THE ANIMAL PRODUCE.	Francs.
Meat (1,100,000,000 of kilog.),	880,000,000
Wool, hides, tallow, offal,	200,000,000
Milk (1,500,000,000 of litres),	150,000,000
200,000 horses at 400 fr.,	80,000,000
Poultry,	15,000,000
Total,	1,325,000,000

OF THE VEGETABLE PRODUCE.	
Wheat (38,000,000 of hectolitres),	600,000,000
Barley (15,000,000 of hectolitres for human consumption),	120,000,000
Potatoes (65,000,000 of hectolitres for human consumption),	130,000,000
Hay and oats for non-agricultural horses,	300,000,000
Flax, hemp, vegetables, and fruits,	85,000,000
Wood,	40,000,000
Total,	1,275,000,000

Distributed per hectare over the whole area of the

United Kingdom, the total gross produce thus reduced gives the following results :—

England, ...	200	francs per hectare.
Lowlands of Scotland, Ireland, and Wales, ...	100	„ „
Highlands of Scotland, . .	10	„ „
General average,	135	francs per hectare.

These tables suggest a host of reflections. Whilst France, taken as a whole, produces 100 francs per hectare, England proper produces 200. The animal produce alone of an English farm is equal to at least the total produce of a French farm of equal area—all the vegetable production being additional. Taking only the three principal kinds of domestic animals—sheep, oxen, and pigs—and not taking poultry into account, the English obtain from these four times more than we do in butcher-meat, milk, and wool. Among the vegetable products, whilst the French soil does not produce quite one hectolitre and a half of wheat per hectare, the English soil produces three; and it gives, besides, five times more potatoes for human consumption. It produces neither rye, maize, nor buckwheat, but abundantly makes up for this in oats and barley; and this it requires to do, for, less fortunate than we, it has to obtain from one of these crops the national beverage. "We are forced," says Arthur Young, "to have recourse to our best land for our beer ; the climate of the French gives them a great superiority in this respect, since the most barren soils are available for the cultivation of the vine."

Here the animal product becomes sensibly superior to the vegetable. We shall again find at least a similar productiveness in Wales and in Scotland. Ireland alone exhibits, like France, a reverse proportion.

This superiority in production is shown besides by two facts, which serve to prove the statistical figures. The first is, the condition of the population; the second, the selling price of the land.

By the census of 1841, the total population of the United Kingdom was twenty-seven millions of souls, and that of France thirty-four. Thus, while the United Kingdom maintained nearly one head per hectare, France maintained one only per hectare and a half. Supposing the rate of consumption in both countries to be the same —which it should be in the aggregate, for if the English population consume more than the French, the Irish consume less—we arrive at a result nearly equal to that obtained by a comparison of the production of both agricultures. The difference is slightly in favour of the United Kingdom; but this is again adjusted by the importation of bread-stuffs.

If we divide the two populations into regions, the comparison gives us detailed results, which only confirm those of the aggregate.

In 1841, England proper, even including Wales, maintained a population of four to 3 hectares, which we find to be the case in those departments of France where production is as high. Scotland, as a whole, maintained only one head for every 3 hectares, and our central region one to 2. Ireland counted one head per hectare, and our south-west region one to 2, which indicates for Ireland a production equal to double; but the unfortunate Irish being not nearly so well fed as our people, the account becomes readjusted.

With respect to the average value of the land, which is usually estimated by its productiveness, that of England proper was worth £40 per acre, or 2500 francs per

hectare; and the rest of the United Kingdom, exclusive of the Highlands of Scotland, about one-half of this figure, or 1250 francs. The Highlands of Scotland, with their uncultivated lands, were worth, at most, £2 per acre. Deducting 20 per cent from these prices, we obtain for England an average of £32, for the Highlands 32s., and £16 for the rest of the United Kingdom.

The cultivated lands of the northern half of France may be worth, on an average, £24 per acre, and those of the southern half £16. Valuing the eight million hectares of uncultivated lands at £2, and the eight millions of forest grounds at £10, we find a general average of £16 per acre.

Thus a comparative examination of agricultural products, the number of the population, and the money value of the land, all combine to prove, upon the most moderate estimates, that, previously to 1848, the product of British agriculture, taken as a whole, was to the product of French agriculture over an equal surface as one hundred and thirty-five to one hundred; and if we compare England alone with the whole of France, the former produced at least twice as much as the latter. This demonstration appears to me to amount almost to proof.

To be very exact, there must be added to these products one which is very difficult to estimate, but which is not among the least important: this is the unexhausted fertility, the surplus accumulations of manures, and improvements of all sorts, which the crops have annually left in the ground. It is in order not to lose sight of this that most compilers of statistics have been led to include forage, straw, and manure among the products; but such a mode of reckoning is evidently erroneous, since the crops annually absorb the greater portion of the vigour thus communicated to the soil. That which

remains is the only real product, but how is this to be measured? One element alone may indicate it with some degree of certainty—namely, the increased value of the soil; no doubt, this increase may be brought about by other means, but the steadiest and most active is the increase of fertility resulting from good husbandry. With our neighbours it may be reckoned, on an average, at one per cent on the value of the land—say 4s. to 5s. per acre for the three kingdoms, and 7s. for England proper. In France, it may probably be one-half per cent on an average—say 2s. per acre; in our best-cultivated departments, it reaches, perhaps, the English average, but in others it is almost nothing.

Although this estimate is, and can be, only hypothetical, it may suffice to explain the superior productiveness of the land in England, notwithstanding the natural inferiority of both soil and climate. Artificial fertility, there, compensates for these drawbacks, and has already constituted a landed capital very superior to ours, and which continues to increase.

Three sorts of capital conduce to the development of agricultural wealth: 1st, Sunk capital, which is formed in course of time by outlays of all kinds for bringing the land into good condition; 2d, Working capital, consisting of animals, implements, and seeds; 3d, Intellectual capital, or agricultural skill, which is improved by experience and thought. These three capitals are much more diffused in England than in France,—and why? We shall inquire into this presently, and it will surprise us to find that the superiority of the English is not more marked than it is. Arthur Young, when travelling through our poorer districts in 1790, exclaimed, in his characteristic language, "It does, indeed, try one's patience to behold a country so lovely, and so favoured by

Providence, treated so shamefully by men!" He might speak differently now, or, at least, he could speak thus only of the most backward portions of our territory. We could show him whole provinces almost as well cultivated as his own dear England, and everywhere the elements of progress ready to spring up. If the greater number still only vegetate, it is owing to the absence of favourable circumstances.

Unfortunately, before arriving at a full explication of the facts, we require to enter into some further statistics of detail—dry, no doubt, but necessary nevertheless; the next chapter will finish what we have to say on this subject.

CHAPTER VI.

RENTS, PROFITS, AND WAGES.

To give the finishing touch to this picture, we have now to inquire how the gross production, previously to 1848, was distributed; that is to say, after deducting taxes and accessory expenses, what portion of this five milliards (£200,000,000) of nominal value came to the proprietors of the land, constituting the *rent;* what remuneration the farmer got for his trouble and use of capital, or, in other words, the *profit;* and how much of it was paid for manual labour, properly so called, or *wages.* When we have completed a similar inquiry for France, our comparison between the two agricultures will be complete.

First of all, the portion contributed to the general expenses of the country, or taxes.

Many errors have been diffused, and are still credited in France, respecting the system of taxation which exists in England. It is commonly believed that land in England is almost free of imposts, and that the whole public revenue is composed of indirect taxes. This is a great mistake, for nowhere does land bear such heavy burdens as in England. Only it is not the State which collects what the land pays directly; at least land contributed hardly anything to the public treasury before the imposition of the income-tax. The only impost paid directly to the State was a trifling tax, which proprietors

for the most part have redeemed—the land-tax; but if indirect taxes constitute nearly the whole revenue of the State, there are direct imposts which no less exist under the form of local taxes.

These burdens are three in number: the poor's rates, the parish and county rates—equivalent to our communal and departmental revenues—and Church tithes. Taxation for the poor, in spite of all endeavours to reduce it, amounted previously to 1848 to six millions sterling for England alone. Parish and county rates, for roads, bridges, police, prisons, &c., exceed, still for England alone, four millions sterling—together ten millions, of which more than two-thirds is paid by rural property. Add to this the unredeemed portion of the land-tax, amounting to one million sterling for England; and, finally, the third charge—namely, tithes—at one time variable and arbitrary in their rating, but now commuted to almost a fixed charge, amounting to at least seven millions sterling; and we have altogether a sum of fifteen millions, which, for England and Wales, containing fifteen millions of hectares, makes an average of 25 francs per hectare, or 8s. per acre.

This average gives but an imperfect idea of the burdens upon certain parts of the soil in England, for a portion of the tithes having been redeemed, as well as a portion of the land-tax, and the poor's rate being very unequally distributed—since, not being centralised, it varies with the fluctuations of pauperism in different localities—the consequence is, that certain districts are much below, and others much above the average. It is no uncommon thing to find lands in England paying as much as 50 francs per hectare (16s. per acre) for all kinds of taxes.

Ireland and Scotland are less burdened, particularly

Scotland; most of the English taxes are unknown there. Scotland pays about £500,000, and Ireland £1,500,000 of direct taxes.*

In France the assessment on land, exclusive of house property, amounts in principal and additional per-centages, and including payments in kind for roads, to a total of two hundred and fifty millions, or 5 francs per hectare; this impost, therefore, is one-fifth in nominal value, and in reduced value one-fourth, of what it is in England.

To these figures must be added the income-tax, which resembles our personal and movable property contribution, and absorbs about three per cent more out of the net income of the proprietors, and one and a half per cent of that of the farmers. The tax upon house property, of which the landed proprietors bear their share, is proportionate to that chargeable upon the land properly so called. Lastly, the indirect taxes: these, besides that they materially reduce the proprietors' revenue by increasing the price of all commodities, bear heavily upon certain agricultural products, especially barley, used in the manufacture of beer, which pays an excise of no less than five millions sterling: the question of reducing this (the malt) tax has been recently agitated, but nothing is yet decided. Our impost upon beverages produces, as is well known, four millions sterling.

Landed property in England, to be sure, is partly free from a charge which greatly affects the land in France; this is the tax upon successions, transferences, and mortgages. But this exemption, which applies only to land that is freehold, and lands subject to manorial rights, or

* This, however, seems exclusive of tithes or taxes for the support of the Church in both countries. We are not aware that there are very many local taxes exigible in England which are not well known in Scotland, though the rate may not be so high.—T.

copyholds, has just been considerably reduced by recent legislation : it loses, besides, much of its importance when we consider the expenses of all kinds to which English property is exposed owing to the want of a good system of registration.

Here, then, is a first result of the great amount of produce obtained from the land in England—the possibility of increasing taxation. I shall not stop to point out the great benefit resulting from it to the country in general, and to agriculture itself, which is the first to reap advantage from the outlay of its own money. It is evident that, if French landed property could pay much more in taxes, the aspect of our fields would soon change; they would be covered with roads, bridges, aqueducts, and works of enterprise and skill, which as yet they are without, for lack of those funds which are abundant with our neighbours.

After taxes come the expenses accessory to cultivation ; such as the cost of artificial manures, the keeping up of implements of husbandry, renewals of seed, breeding-stock, &c. : it is as much as a French farmer can do to devote to these remunerating expenditures 4 or 5 francs per hectare, whereas in the United Kingdom they cannot, even previous to 1848, be estimated at less on an average than 25 francs per hectare, and for England proper 50 francs at least. This, we may remark, is eight or ten times more than in France, even making the reduction of twenty per cent. Such is the second effect of this superior production—the more that is produced, the greater the resources available for increasing the production ; and wealth multiplies of its own accord.

Notwithstanding this portion set apart for taxes and accessory expenses, the remainder of the gross proceeds, when divided among those who, by their capital, intelli-

gence, and labour, have co-operated to realise it, is found to be greater for each in England than it is in France.

In the first place, we take the rent paid to the proprietor of the land, or the return upon capital invested. The notion of rent is not so clearly defined in France as it is in England; it is confounded with the farmer's profit and return for working capital when the proprietor directs the cultivation himself, and even with wages properly so called, when he cultivates his property with his own hands. The average rent of land in France may, however, be reckoned at 30 francs per hectare—that is to say, the net return on capital sunk, after deducting all return for working capital, wages, and profit; say a total of fifteen hundred millions on our fifty millions of hectares, cultivated and uncultivated together.

Owing to the system of cultivation carried on in England, which almost always discriminates between proprietorship and tenancy, it is more correctly known what, previously to 1848, was the rent from landed property in the different parts of the United Kingdom.

We find the *minimum* rent in the extreme north of Scotland—Sutherlandshire and the adjacent islands—where it is as low as 1.25 francs per hectare of nominal, or 1 franc of comparative value (4d. per acre). The whole of the Highlands, containing, as we have seen, nearly four millions of hectares, do not yield on an average more than 3 francs per hectare to the proprietors (1s. per acre). The *maximum* is obtained from meadow-lands in the environs of London and Edinburgh, which let as high as £30 per acre; rents of £8, £5, and £3 per acre are not uncommon in the Lothians, and in the neighbourhood of large towns in England. All the centre of the island, including Leicestershire and the counties surrounding it, gives an average of 30s. per acre (100 francs

per hectare), and is beyond comparison the richest part of the three kingdoms. As we recede from the heart of the country, the rent of land declines: in the south—Sussex, Surrey, and Hampshire—it falls to 15s. per acre; in the north—Cumberland and Westmoreland—to 10s.; and in the west, and the poorest parts of Wales, to 3s. The average for the whole of England is 24s. per acre (75 francs per hectare).

In the Lowlands of Scotland, the million of hectares upon the two firths of Forth and Tay are rented at nearly as much as Leicestershire and the counties adjoining it; but in like manner, as we recede from these favoured lands, rent falls, and the average of the entire Lowlands becomes equal to that of its English neighbours, the counties of Cumberland and Westmoreland, and the Principality of Wales.*

In Ireland, we find in County Meath, in Leinster, and in the adjoining counties of Louth and Dublin, another million of hectares where the rent is as high as the centre of England, but at the same time we find a much lower average in the mountains on the west, and in the whole of Connaught.

In review of the whole, and adopting the same classification as when estimating the gross production, we have the following result:—

	Average rent per hectare.			
England, . .	75 francs,	or, per acre,		24s.
Lowlands of Scotland and Wales,	36	„	„	12s.
Highlands of Scotland, .	3	„	„	1s.
Three-fourths of Ireland, .	50	„	„	16s.
North-west of Ireland, .	20	„	„	6s. 6d.
General average, .	50	„	„	16s.

But we have to reduce these figures 20 per cent,

* What are properly understood by the Lowlands of Scotland yield a higher average rent by 3s. to 4s. per acre than the districts to which they are above compared.—T.

according to the basis of calculation already adopted, making them as follows :—

England,	60	francs,	or 20s.
Lowlands of Scotland and Wales,	30	„	„ 10s.
Highlands of Scotland,	2.40	„	„ 10d.
Three-fourths of Ireland,	40	„	„ 13s.
North-west of Ireland,	15	„	„ 5s.

General average, 40 francs, or 13s. per acre.

In France, in the department of the Nord, rent attains an average of 100 francs per hectare, making it equal, and even superior, to the best English counties. In the departments adjoining, it still amounts to 80 francs, from which it gradually declines until we reach the departments of Lozère, and of the Higher and Lower Alps, where it falls to 10 francs. In the island of Corsica, like the Highlands of Scotland, it does not exceed 3 francs.

In the second place, as to the farmer's profit. This, in England, is usually estimated at half the rent, say 25 francs per hectare for the whole of the United Kingdom ; or in reduced value, 20 francs. This sum divides itself into two parts, the return upon capital employed, and the profit properly so called, or remuneration for agricultural skill. The return for capital being reckoned at 5 per cent, the portion for profit should be the same, which makes the return upon capital employed 10 per cent. The average working capital for the three kingdoms should therefore be 250 francs per hectare, or 200 francs (65s. per acre) in reduced value. As this capital belongs almost entirely to the farmers, it is they who get nearly the whole of this portion of the gross production. In England proper, the average income of the farmers may be 40 francs per hectare (13s. per acre), implying a working capital of 400 francs, or 320 in reduced value.

In France the corresponding profit amounts at most to 10 francs per hectare ; that is to say, half the United

Kingdom average, and one-third of that of England proper. Only the north of Scotland and west of Ireland come below the French average: the rest, generally speaking, is higher. In France it is as difficult to distinguish the profit as the rent. One-fourth of the soil only is rented, and in the remaining three-fourths, profit is confounded either with rent or wages. Upon the whole, however, we may consider the working capital with us to be 100 francs per hectare. This is one of the most striking signs of our inferiority; for in agriculture, as in all kinds of industry, the working capital is one of the chief agents of production.

The farmers of England proper, upon an equal surface, enjoy a revenue at least equal to our French proprietors. The farmer of two hundred and fifty acres, for example, has a net income equal to 3000 francs (£120), while a proprietor with us, of a like extent, and under average circumstances, would realise no more. Farmers in the best parts of England make 50, 60, up to 100 francs per hectare (15s. to 30s. per acre), and there are some whose total incomes amount to from £500 to £1000. Hence the importance, in a social point of view, of that class, which is as firmly established upon the soil as property itself. These are the gentlemen farmers; they live for the most part in a quiet comfortable style, have their newspapers and periodicals, and produce occasionally upon their table a bottle of claret or port. When visiting the country in England, and provided with a few letters of introduction, one meets with a hospitable reception from these kind and simple families, many of whom have occupied the same land for several generations. The most perfect order reigns in their domestic economy; everything in their houses is conducted with that habitual regularity which indicates long usage. Comfort has

gradually been built up by the industry of successive generations, especially since the days of Arthur Young, and they enjoy it as an honourable and laboriously acquired possession. None of them ever dream of becoming proprietors, for they are better off as they are: to have £100 of income as a proprietor, a capital of at least £3000 is necessary, whilst £1000 is sufficient to produce the same income as a farmer.

Lastly, we come to wages. Here the advantage appears to be on the side of France, inasmuch as we appropriate to the payment of wages a larger portion of our raw products than does the United Kingdom. This question of wages, however, is very intricate, and when closely examined, the advantage again is in favour of our neighbours, at least in respect to three-fourths of the country. Only their superiority in this particular, previous to 1848, was less marked than in the other parts of their rural system; it was in fact here that the weakest part of their system lay. The evil in some parts of the country was serious and deeply seated, and threatened to become general.

Upon examination into the distribution of wages previous to 1848, whether in France or in the different parts of the United Kingdom—leaving Scotland out of the question for the present, on account of the peculiar phenomena she presents—we find that in England a fourth only of the gross production was appropriated to payment of wages—say equal to 50 francs per hectare, or thereabouts—whilst in France and Ireland one-half was thus disposed of—say also 50 francs per hectare, or the equivalent. But let us look at the other side of the picture—the number of labourers required on both sides. In England this number had been reduced to the lowest point; in France it was much larger, and in Ireland much greater still. The following may be taken as the

approximate number of the rural population in the three countries :—

England,	4,000,000,	out of a population of	16,000,000
France,	20,000,000,	„ „	35,000,000
Ireland,	5,000,000,	„ „	8,000,000

Hence it follows that the rural population in England formed a fourth only of the whole community, in France four-sevenths, and in Ireland two-thirds : distributed over the surface of the soil, the proportions were—England, thirty head to one hundred hectares; France, forty head; Ireland, sixty.

These figures explain everything. Although England expended in wages only the equivalent of 50 francs per hectare, whilst France and Ireland paid as much, the effective wage would be considerably more in England than in France, and in France than in Ireland, for this simple reason, that it was divided among a smaller number of hands.

With these data before us, we can now find the measure of the organisation of labour in the three countries. In England, thirty persons suffice to cultivate one hundred hectares, so as to produce equal to 200 francs per hectare, whilst in France forty are necessary for obtaining an average production of 100 francs, and in Ireland 60; hence it follows that labour in England was much more productive than in France, and in France than in Ireland.

These general data are confirmed by facts of detail. For instance, the average wage of a farm labourer in England before 1848 was 9s. to 10s. a-week, or 2 francs per working day ; and in reduced value, 1.60 francs. In the richest districts it rose to 12s., or 2.50 francs per working day, or 2 francs reduced value. In the poorer districts it was as low as 8s., or a little more than 1.50 francs per day, equal to 1.25 francs reduced value.

In the Lowlands of Scotland, and in Wales, the average rate of wages was 8s. a-week, or 1.25 francs reduced value per working day. In the Highlands of Scotland, and in three-fourths of Ireland, the average was 6s. a-week, or 1 franc reduced value per working day. In the west of Ireland, the average fell to 4s., say 70 centimes per day.*

In France, the average farming wage is 1.25 francs to 1.50 francs per working day; but in certain districts it is as high as the English, and in others again as low as in Ireland.

Thus, owing to the reduction of manual labour—one of the bases of their agricultural system—the English were enabled, although in a less proportion, to raise their rate of wages at the time when rents, profits, taxes, and other expenses took a start.

In addition to the annual sum paid in wages, amounting, in England, to £28,000,000 of nominal value, the labouring classes there possess another great resource in the poor's-rate, which is nothing more nor less than a supplementary wage, and goes to increase the amount annually paid to them by £6,000,000.

Finally, it is only necessary to enter a labourer's cottage in England, and to compare it with one such as our cultivators mostly inhabit, to perceive a difference in the general comforts of the two people. Although the French peasant is frequently proprietor of the land, and thus adds a little rent and a little profit to his wage, he does not live so well as the English farm-labourer. He is not so well clothed, less comfortably lodged, and not so well fed: he eats more bread, but it is generally made of rye, with the

* The wages here stated are, upon the whole, rather under the mark, both as regards England and Scotland; but at the higher rate they all the better turn to establish the author's argument.—J. D.

addition of maize, buckwheat, and even chestnuts, while the bread of the English peasant is wheaten, with sometimes a slight addition of barley and oats; he sometimes drinks wine or cider, while the English peasant has only beer; but he has rarely meat, and the English peasant has it often, or at least pork.

Notwithstanding these advantages, the question of wages, even in England, was a heart-burning subject previously to 1848. There is no doubt that the race, the climate, and the habits of the English farm-labourers, are productive of more wants than with us. Wages in England are lowest in the southern part of the island, comprising the counties of Dorset, Devon, and Cornwall; the rate there was equivalent to 1.25 francs per day,—and although on a par mostly with our wages in France, this was generally considered insufficient. In the parts of Ireland and Scotland where wages fell below the French average, the misery produced was infinitely greater than with us upon the same rate. The equivalent of 20 sous (10d.) a-day, with which many of our peasants feel contented, caused a great outcry; at 70 centimes (7d.), as in the Hebrides and Connaught, existence appeared absolutely impossible.

Alas! I know parts of France where the people still live upon that rate, and that without much complaint. Certainly this poverty, in itself sufficiently distressing, is not aggravated by the harshness of a hyperborean climate, and, what is still worse, by the feeling of excessive inequality. Seventy centimes a-day is anywhere a scanty wage; but it must be especially intolerable in a country where the current rate of labourers' wages is in some places 2.50 francs, and that of mechanics on an average still more.

According to what has been above stated, the gross production of France and that of England proper may be divided nearly as follows:—

FRANCE.

Proprietor's rent,	30	francs	per hectare.
Profit of the cultivator,	10	„	„
Taxes,	5	„	„
Accessory expenses,	5	„	„
Wages,	50	„	„
Total,	100	„	„

ENGLAND.

	Nominal Value.			Reduced by 20 per cent.
Proprietor's rent,	75	francs	per hectare.	60
Profit of the farmer,	40	„	„	32
Taxes,	25	„	„	20
Accessory expenses,	50	„	„	40
Wages,	60	„	„	48
Total,	250	„	„	200

All the recipient parts, with the exception of wages, receive then a larger share in England than in France, and that even at the reduced value: rent is double, profit more than treble, taxes quadruple; wages, even although equal, or nearly so, in absolute amount, are relatively a little higher. The rest of the United Kingdom showed less satisfactory results, but these almost always superior to ours.

Such are the facts, or at least such they were, previously to 1848. The changes that have since taken place, both in France and in the United Kingdom, have been considerable, especially with our neighbours, where a revolution more legitimate, more rational, and above all, more fruitful, than our revolution of 1848, has been peaceably accomplished, while we are still labouring to regain the position from which we precipitated ourselves. During the last five years we have experienced a state of things not unlike what took place in France and in England between 1790 and 1800. This period has been distressingly barren in results for us, but largely productive for them. While

we were vociferously propounding a multitude of questions, without settling any, they were quietly working out theirs, and now we both come forth from the trial, they strengthened and we weakened.

Before entering upon the subject of the respective crises which have further increased the distance we have shown as already existing between us, it is important to examine into the causes of the superiority in English agriculture up to 1847. These causes originate in the history and entire organisation of the two countries. The agricultural condition of a people is not an isolated fact, but part of a great whole. The responsibility of the imperfect state of our agriculture does not attach altogether to our cultivators ; its ulterior progress depends not solely upon them, or, rather, it is not by fixing their attention on the soil that they will altogether be able to avail themselves of the phenomena there presented, but by endeavouring again to rise to the general laws which govern the economical development of communities.

Hitherto they have had little taste for such studies ; they reject them almost unanimously, as practically useless and dangerous : I believe them to be mistaken, and I hope to prove it to them. Practically, there can be no good agricultural without a good economical condition ; the one is the effect, the other the cause.

CHAPTER VII.

CONSTITUTION OF PROPERTY.

THE superiority of English agriculture is pretty generally attributed to large property; this opinion is true in certain respects, but too much importance must not be attached to it.

In the first place, property in England is not so much concentrated as is commonly imagined. There are no doubt in that country immense territorial fortunes; but these fortunes, although they strike the attention of a foreigner, and even of the natives themselves, are not the only ones. In addition to the immense possessions of the nobility, properly so called, are the more modest domains of the gentry. On the 19th Feb. 1850, Mr Disraeli stated, without contradiction, in the House of Commons, that in the three kingdoms it was reckoned that there were 250,000 landed proprietors; now, as the whole extent of the cultivated land is twenty millions of hectares, this gives an average of eighty hectares to each family, and, including the uncultivated land, it gives one hundred and twenty to each. The same orator, in estimating, as we do in France, the net revenue of the landed proprietary at sixty millions sterling, found that these 250,000 divisions gave an average rental of £240, or equal to £190 in reduced value.

Like all averages, it is true that this gives but an

imperfect idea of the facts. Among these 250,000 proprietors, a certain number, at most 2000, possess among them one-third of the land and total revenue, and of these 2000 there are 50 having princely fortunes. Some of the English dukes possess entire counties, and have a revenue of millions (of francs). The other members of the peerage, the baronets of England, Scotland, and Ireland, and the large proprietors who do not form part of the *noblesse*, follow in their train. Allotting to these 2000 families, 10,000,000 hectares, and 500,000,000 francs of revenue, gives 12,500 acres, and £10,000 of income to each family.

But the larger the possessions of the aristocracy, the more does it reduce those of the second-rate proprietors. Still these latter own two-thirds of the soil, and play a part twofold more important in the constitution of English property. Their average holding is reduced to about 200 acres, and their income from land to £160; applying the reduction of 20 per cent to this, it amounts to only £130. As there must necessarily exist a great difference among them, it may be concluded that properties yielding £50 to £100 of rent are not so uncommon in England as one might suppose; in fact, this is apparent when looking into the subject more closely.

Another erroneous impression—which, to a certain extent, however, is true, though exaggerated—is, that landed property in England does not change hands. Now, although English property is not so easily transferred as with us, it is far from being entirely fixed. Here again a particular fact has been unduly generalised. Certain lands possess entails or other rights, but most are free. One need only run the eye down the immense columns of advertisements in the daily newspapers, or go for an instant into one of the estate agency offices, so

numerous in London and other large towns, to be convinced that properties of fifty to five hundred acres—that is, twenty to two hundred hectares—are not rare in England, and in fact are sold every day.

These newspaper advertisements usually run as follows : " For sale, a property of so many acres in extent, let to a substantial tenant, with an elegant and comfortable residence, a good trouting stream, beautiful lawn, kitchen and flower gardens, close to a railway and town, in a picturesque country, &c." In the offices they also show a plan of the land, and a tolerably well-executed view of the house and offices. It is always a pretty building, almost new, beautifully kept, with exterior decorations in bad enough taste, but the interior arrangements simple and commodious ; standing upon a lawn, more or less extensive, with clumps of trees upon each side, and cows grazing in front. There are two hundred thousand residences of this description scattered over the verdant surface of the British Isles.

Notwithstanding the strong desire in England for the possession of land, which gives a man the title of landlord at once, its value is not proportionably higher than in France. The cost is generally thirty times the rent ; that it is to say, yielding about 3 per cent upon the outlay. As soon as a man has made a little money in business, and has a few thousand pounds to invest in a country house, he has ten estates, varying in value from £4000 to £40,000, to choose among. In a country where the acre of land is worth on an average £40, it only requires fifty acres to constitute a property of £4000, and only seven hundred and fifty for a value of £40,000, including house and offices.

In France the land is certainly much more divided. Everybody knows the celebrated number of eleven and

one-half millions of land assessments, which seems to indicate a like number of proprietors; but since the inquiry instituted by M. Passey, it is also well known how far this figure is deceptive. Not only does it often happen that a single tax-payer pays several assessments, thus destroying what this number would otherwise seem to indicate, but the house property of towns figures in the number of assessments, which reduces the actual number of landed properties to five or six millions at most.

The assessment, however, has its particular value, and as in England, in order to arrive at the most general state of property, we exclude those vast possessions of some great lords which would otherwise give an unduly high average, so must we in France put in their true place that multitude of small proprietary which so greatly lowers the average. Upon eleven and one-half million of assessments, five and one-half millions are below five francs, two millions are from five to ten francs, three millions ten to fifty francs, six hundred thousand from fifty to one hundred—five hundred thousand only are above one hundred francs; it is this half million which constitutes the bulk of the landed property. The eleven millions of assessments below one hundred francs may be set down as appertaining to about one-third of the total surface, or eighteen million hectares (forty-five million acres), the other two-thirds, or thirty-two millions of hectares, belong to four hundred thousand proprietors, deducting those who are only urban proprietors, and this for each property gives an average of eighty hectares (two hundred acres).

Thus in cutting off, on the one side, the very large properties, and on the other the very small ones, occupying in each country a third of the soil, the average in France would be the same as the English average for the remain-

ing two-thirds. Under this apparent similarity there lies an inequality, inasmuch as the revenue per hectare is much higher in England than with us ; but, all things taken into account, the real difference is not what is supposed. In France there are about one hundred thousand landed proprietors who pay upwards of 300 francs of direct taxes, and whose fortunes average those of the mass of the English proprietors. Of these, fifty thousand pay 500 francs and upwards. Estates of five hundred, one thousand, and two thousand hectares are frequently to be met with, and territorial fortunes of 25,000 to 100,000 francs and upwards of rent are not altogether unknown. We may have probably about one thousand large proprietors, who for extent of domain rival the second grade of English landlords, by far the most numerous of the class. It is true, we have proportionably fewer of them than our neighbours, and immediately following our chateaued gentry swarm the host of small proprietors, whilst the English gentry have at their back the immense fiefs of the aristocracy. To this extent, but only to this extent, it is correct to say that property is more concentrated in England than it is in France.

This concentration is favoured by the law of succession, which, in default of will, transmits real property to the oldest son ; whilst in France, real property comes to be equally divided among the children. But these two laws, so opposed in principle, are not so different in their practical effects. The parent in either country may devise his property as he chooses, and this is frequently done ; besides, other common and more urgent reasons induce a deviation from that appropriation which is provided by law.

In France, dowries to married daughters reconstitute

in part what the law of succession destroys. In England, if real property is not divided, movable is; and in a country where personal property is so considerable, this division cannot fail, through sales and purchases, to exercise an influence upon the partition of fixed property. The more rapid increase of population with our neighbours, is, in its turn, another element which distributes property. In fact, properties are being constantly divided in England, and every day new country residences are constructed for new country gentlemen; at the same time, many properties are being reconstituted in France, and the assessment returns show that the increase in the number of the large is greater than that of the small.

Just as concentration of property in England is very much overrated, so the influence which large property exercises over agriculture is also exaggerated. This influence bears a relative proportion to the actual concentration, but both have their limits; large property does not always make large farming. The largest properties may be subdivided into small farms. It is of little consequence whether ten thousand hectares are in the possession of one man, if, for example, he divides them into two hundred farms of fifty hectares each. We shall presently see, in treating of farming properly so called, that this is in fact commonly the case; the influence of large property is therefore nearly null. Let us admit, however, that upon the whole, large properties are favourable to large farming, and that on this account it has a direct influence upon a portion of the English soil; is this action as beneficial as some legislators believe? and are all other systems as injurious as they affirm? That is the question.

In the United Kingdom we have seen that, in a certain sense, there are two descriptions of properties—the large

and the middle sized. The large do not occupy more than a third of the land, and a portion of that third being divided into small farms, it follows that the action of large properties is not felt, except to the extent of about a fourth. Is this fourth the best cultivated? I do not believe it. The immense properties of the English aristocracy are principally found in the less fertile regions. The Duke of Sutherland, who is the largest proprietor in Great Britain, possesses in one compact estate nearly 750,000 acres in the north of Scotland; but these lands are worth only 30s. per acre. Another nobleman—the Marquess of Breadalbane—possesses in another part of the same country almost as much of a similar value. In England the extensive properties of the Duke of Northumberland are situated, for the most part, in the county of that name, one of the most mountainous and least productive; those of the Duke of Devonshire, in Derbyshire, and so on. It is especially in such lands that large properties should be; there only can they produce good effects.

The richest parts of the British soil—the counties of Lancaster, Leicester, Worcester, Warwick, and Lincoln—are composed of large and middling sized properties. In Lancashire, one of the richest of all, even in an agricultural point of view, middling and almost small properties predominate. Upon the whole, it may be asserted, especially if Ireland is not included, that the best cultivated land in the three kingdoms is not that which belongs to the great proprietors. There are, doubtless, striking exceptions; but such is the rule, generally speaking.

We find also, not exactly in England, but in an English possession—the island of Jersey and its dependencies—a country wholly composed of small proprietary. The Norman laws of succession, which provide for an

equal division of lands among the children, continue there in full force. "The inevitable effect of this law," says David Low, "acting for the last nine hundred years within the narrow limits of this small island, has been to reduce the whole land into small holdings. There is scarcely to be found in the whole island a single property of forty acres; many vary from five to fifteen, and most of them are less than fifteen." Is the agriculture there poorer? Certainly not. The land so divided is cultivated like a garden. It is farmed on an average at from £4 to £5 per acre, and in the environs of St Heliers as high as £8 to £12. In spite of these enormous rents, the farmers live in a state of comparative comfort upon an extent of ground which, elsewhere, would not suffice to maintain the poorest labourer.

In France, also, there are two descriptions of properties —the middle-sized and the small. It is generally found that farming is farther advanced where the small predominates. Such are the departments of the Nord and the Bas Rhin, and almost all the rich districts of the other departments. It is under this subdivision of property that most progress manifests itself with us. It is a feature in the national character. The same fact is observed in other countries—in Belgium, in Rhenish Germany, in Northern Italy, and even in Norway.

Everywhere else, except in England—that is to say, in Spain, in Germany—very large properties have done more harm than good to agriculture. The feudal lord lives far from his domains; he knows them only by the revenue he draws, and which, before it reaches his hands, passes through a host of servants and stewards, more alive to their own than to their master's interests. The land, impoverished by greedy hands, never receiving that care which would restore and increase its fertility, aban-

doned to tenants as poor as they are ignorant, languishes in a state of neglect, or gives only those scanty productions which it cannot deny. In England the case is different. Many noblemen think it no disgrace to manage their own properties, and to devote to the improvement of the land the greater portion of what they draw from it. But the essential evil of very large properties is not altogether destroyed; for although many landlords admirably fulfil their duties, how many of them neglect their inheritance!

Is it right, then, to extol the large-property system to the disparagement of others, as has been done,—to wish to extend it everywhere, and to proscribe the small? Evidently not. In viewing the question merely in an agricultural aspect, the only one to be considered at present, general results argue more in favour of small properties than of large. Besides, it is no easy matter to change the condition of property in a country. This condition owes its origin to an accumulation of ancient circumstances essentially necessary, and which are not to be done away with at pleasure. To assert that large properties in England are the sole cause of agricultural progress, and for this reason to wish to impose that system upon countries which reject it, is manifestly wrong in itself; and to lay down as a rule that progress in farming cannot go on, except upon the condition of an impracticable social revolution, is fortunately erroneous.

I do not the less admit that the state of property in England is more favourable to agriculture than in France; I wish only to contend against the exaggeration of this view.

The question has been little understood. What is of consequence to cultivation is, not that the property should be large, but that it should be rich, and these are two

very different things. Rich is a relative term. A man may be poor with a large property, and rich with a small one. In the hands of one thousand proprietors, who have only ten hectares each, and who lay out 1000 francs per hectare, the land will be twice as productive as in the hands of a man who himself possesses the whole ten thousand hectares, and lays out only 500 francs. Sometimes it is the large property which is rich, sometimes the small, sometimes the middle-sized; all depends upon circumstances. The best constitution of property is that which attracts to the soil most capital, either owing to the owners being richer relatively to the extent of the land they possess, or because they are induced to lay out upon it a larger proportion of their income. Now, there is no doubt that, in the present state of things, our French proprietors are not in general so rich as the English proprietors, and are consequently less disposed to make advances to the soil. It is our smallest proprietors who are most liberal to their lands, and this is one of the reasons why small properties are looked on with such favour among us.

In England, on the contrary, if it is not altogether the very large proprietary, it is at least the best half of the middle-sized, who can be, and in fact who are, the most generous towards the soil. The best cultivated and most productive lands are those whose owners enjoy about £1000 a-year of income. Among this class we find both capital, too often wanting with the smaller proprietors, and a taste for agricultural improvements, not always to be found among the very large proprietors, owing to their want of acquaintance with rural affairs.

When this love of country pursuits is found in a large proprietor, it is perfection. All England must remember with gratitude the great services rendered to the cause

of national agriculture by the Duke of Bedford, the Duke of Portland, Lord Leicester, Lord Spencer, Lord Yarborough, and many others. When the will to do good is united to the power which high rank and fortune give, astonishing results may be effected. The Bedford family, among others, has bestowed upon its country magnificent agricultural works. It has reclaimed entire counties from the sea; other portions of country, formerly nothing but extensive moors, have been rendered rich and productive. The representative of this noble house enjoys £100,000 or 2,500,000 francs of income from landed estates; and he is worthy, by the use he makes of it, to succeed to his great agricultural ancestor, whose statue adorns one of the squares in London.

It is doubtless a matter of regret that we have not this element among us, and the causes which have destroyed our very large properties are to be regretted still more than that destruction itself; but we must learn to resign ourselves to what cannot now be repaired, and endeavour to guard against an increase of the evil. The advantages of large property may be partly replaced by the State carrying out a good administration of the local imposts, and by a spirit of combination. This has already begun to work in many parts. Even in England, where the aristocracy have done so much in every respect for national glory and prosperity, they, as a class, are not those who have done most; and, however striking their services, these ought not to detract from those more numerous and more efficacious services rendered by the honourable body of gentry.

In France, where habits of economy are more general than in England, an average income of 25,000 francs (£1000) is not necessary. To keep up a moderate property with us, an income of 5000 to 6000 francs

is sufficient. Upon this income the family of a country proprietor can live comfortably, as society with us is at present constituted, and save every year for productive outlays; with less than this, difficulties arise, unless economy is proportionately increased. With respect to small property, as the possessor is at the same time the cultivator, it prospers under much humbler conditions. A peasant family may live very well in an ordinary way with an income of 1200 francs; and provided they possess some few hundreds of francs over and above this sum, the land does not suffer, but rather improves, in their hands; for nowhere is it the object of more assiduous care, and nowhere does it more liberally repay the attention bestowed upon it.

It is not necessary—and this is one chief source of error into which the advocates for exclusively large properties fall—that the income of the possessor of the land should come to him entirely from the land itself. A considerable portion of this income may be derived from any other source—from some occupation or business in the town, or a salaried post in the country. In this case, the smaller the country property in proportion to the income, the more chance it has of benefiting by infusion of capital. In almost every case properties suffer neglect owing to their being too large for the income of the possessor, but especially when he is in debt: in this case, the greater the extent of the property, the worse its condition; it is nothing then but a false show—a fatal delusion.

The great bane of property is debt—not the debt contracted for the purpose of making improvements, for that is almost always remunerative, but that which trenches upon income, and leaves the nominal proprietor without resources for keeping the property in good order. This

is the real evil with French property; not so much its subdivision. In many cases a still greater division might be the remedy for this evil. The majority of our large proprietors would be gainers if they held less land, and had more money. Those who have less than 5000 to 6000 francs of net revenue would almost all benefit by renouncing land altogether; and among the small proprietors there is also a large number who would do well no longer to attempt a problem which they will never be able to solve. That this liquidation, if it took place, would be profitable to the large, the middle-sized, or the small properties, it is impossible to say beforehand, and in reality it signifies very little.

The debt on land in England is less injurious than in France; not that it is less, for it is on the contrary more, being estimated at as much as half the total value of the land; but because it is borne by richer families. After the payment of interest on their debt, the English proprietors have a larger net revenue than ours, and their very large movable property contributes, together with the greater value of their land, to place them in a much more advantageous position. Nevertheless, public attention on the other side of the Channel has been drawn to the evils of mortgage debt—it is now being seriously considered—and if ever measures be taken to diminish the burden, the revolution which will grow out of it will be rather unfavourable than otherwise to large property. It is, in fact, the larger properties which are most burdened; and a liquidation, by bringing commercial and manufacturing fortunes to be invested more largely in land, would to that extent diminish the present extent of exclusively territorial fortunes. This revolution has already begun in Ireland, and progresses rapidly in consequence of a special Act of Parliament.

I admit that primogeniture has something to do with the superiority in wealth of English proprietors, inasmuch as it prevents the forced division of lands; but the law of entail, which is also put forward as favourable to cultivation, has only bad effects, because it places an obstacle in the way of free disposal of land. It is no doubt hard when a property goes out of the hands of one who has inherited it; and in France the mobility of property, particularly with the fiscal laws, which press hard upon it at every change, is one of its greatest drawbacks; but what is grievous is the cause which obliges the proprietor to sell, not the sale itself. When a proprietor gets into debt and becomes poor, it is desirable for the common good that his property should pass as soon as possible into other hands; it will never otherwise do any good. In this case, the French law, which places few obstacles in the way of sale, is preferable to the English.

As to successions, it is different. The compulsory division of landed property is a real evil, and the time is coming, I hope, when an economical spirit will correct the abuse of the system. The English, on their part, will probably be induced, as rural wealth increases, to do away with entails; practically they have already greatly mitigated their bad effects; and it is noways impossible for them to get free of them altogether, if they really desire it.* Such as they are, the advantages and defects of the two legislations are pretty equally balanced; the source of the superiority of the English system, however real, is not very obvious. The chief cause of agricultural progress does not lie here.

This question was worthy of being put in its true light;

* The English law allows an entail only for the benefit of one or more persons living, and one unborn; when the latter attains majority, the entail ceases, unless it be renewed.

it has been obscured by too many passions and prejudices, which have nothing in common with rural economy. If ever there be a question in France of giving more latitude to the head of a family as regards the testamentary disposal of his property, or of giving facilities in the way of preserving real property intact in the case of successions *ab intestat*, it will be well to keep large property out of the question, for such considerations do not apply to it. It is not the law which has reduced large property in France, but the Revolution; and not only is all artificial retrogression impossible, but in the course which things have taken it would be of very doubtful utility.

CHAPTER VIII.

CONSTITUTION OF FARMING.

THE second cause of the agricultural prosperity of England is generally attributed to large farming; but here, again, ideas on the subject are much exaggerated.

The soil of Britain is not more largely farmed than largely held. No doubt there are very large farms, just as there are very large estates; but these form by no means the majority. There is a multitude of farms under the middle size, which would pass for such even in France; and the number of small tenants is infinitely greater than that of small proprietors. It is reckoned that there are not less than two hundred thousand farmers in England alone, which gives an average of sixty hectares (150 acres) for each farm. In certain parts, such as the plains of Wiltshire, Dorset, Lincoln, and York, farms of several hundreds, and even thousands, of hectares are not uncommon; but in other parts, again, as the manufacturing districts, those of ten and twelve hectares are the most common. In Cheshire many are below ten acres, or four hectares. Of these two hundred thousand farmers, about one-half cultivate their farms themselves, with the assistance of their families. In Scotland the number of farmers exceeds fifty thousand, and in Ireland seven hundred thousand.

In France we have the equivalent of Ireland in our

five or six millions of small holdings below seven or eight hectares; but we have, at the same time, the equivalent of Great Britain in the four or five hundred thousand averaging fifty to sixty. And we are not altogether without our farms of several hundreds of hectares; some such are to be found, principally in the neighbourhood of Paris, which exhibit the best examples of large farming. It is only the immense farms which we have not got, and these are not very numerous in England; they are to be met with only in the most sterile parts, such as in the wild districts of the Highlands, or in the chalky plains of the south, both equally suited for sheep pastures. It is not, then, exactly in extent of the farms that English farming is superior to ours; in this respect we are even more on a par than in respect to property.

The real superiority of this constitution of agriculture —as regards Great Britain at least, for Ireland requires a separate examination—lies in these two important points: first, the almost universal system of leases, which makes agriculture a special occupation; and, secondly, the number of monied men who fearlessly embark in farming.

The advantages which leases possess over other modes of working the soil, and particularly over the *métayage*, are observable in those parts of France where the system is found. It is the great principle of the division of labour applied to agriculture. It raises up a particular class of men, early educated to farming, and who devote their whole life to it. These men are not exactly labourers, but are in comparatively superior circumstances, and are more intelligent. With them farming is a profession, with all the chances of gain and loss; and if the chances of loss are sufficient to keep their attention awakened, the chances of gain also suffice to excite their emulation. England has many examples of fortunes made by farm-

ing; these examples induce very many to become farmers as a money-making profession; while at the same time it is one of the most agreeable, the most honourable, as well as most healthy professions in which the mind and body can be engaged.

The advocates exclusively for large property pretend that it was the means of bringing about the lease system: this is a mistake; leases are not found always in connection with large property. In Russia, in Spain, and in Hungary, there are large proprietors who have on their estates *métayers*, peasants paying rent in labour (*paysans de corvée*), but no farmers; in France, in the departments about Paris, it is middle-sized properties which prevail, and there there are farmers. The lease system consorts better with large property than with any other, but it is compatible with all grades of property, even with small.

It is said that long leases are necessary to make farming pay, and that large properties can alone afford to grant them; this also is a mistake. Long leases are no doubt advantageous, but they are not necessary. In England they are almost unknown, or rather it happens pretty frequently that they have no lease at all. Three-fourths of the farms are held upon what is called tenancy at will; that is to say, on either side six months' notice to quit may be given. I do not say that this is the best contract; I know that it is practicable only in certain cases. I know, also, that at present the tendency in England is to leases, and long leases too; but I say, and this cannot be denied, that the agricultural prosperity of that country has arisen through farmers who, for the most part, had only annual holdings.

We already know what the working capital of these farmers is. Before 1848, £8 per acre, or 500 francs per

hectare, was reckoned the capital necessary for a good farmer. Many, doubtless, had not so much, but others again had more. All make advances to the land with implicit confidence. In that country, where manufactures and commerce offer such inducements for the employment of capital, many people prefer to embark their money in agriculture. While our farmers are sparing to the last degree, considering that what is saved is gain, in England they try who can put most money into the land. This confidence belongs in some measure to large farming. Large farming has especially been the originating cause of large outlay; it is large farming, too, which every day gives the most striking examples of enterprise as applied to the working of the soil; but middling and small farming follow closely upon large. The small farmer, who has only a few hundred pounds of patrimony, does not hesitate to embark it any more than the great capitalist, who has ten times or a hundred times as much. Both launch out together, and generally upon the faith of an ordinary annual lease, expending sums which would seem enormous with us, and which proprietors alone would here undertake. When long leases are required, it is in order that a man may more securely make those advances which the land is constantly demanding.

To large farming is generally attributed the substitution of horses for oxen and machinery for out-door manual labour. The same is said of large outlays for manures and fertilisers, the expense of making and maintaining roads and fences, levelling, subsoil ploughing, draining, irrigation, &c. But this again is quite a mistake. Improvements—that is to say, the useful employment of capital—are a sign of rich and intelligent, rather than of large farming. Small and middling farmers understand the benefit of these quite as well as the great,

whether in England, or wherever farming is as far advanced; they are unknown only where the farmers are poor or ignorant. Now, if farming in England is liberal, it is no less intelligent and skilful.

The English farmers, even the smallest among them, have every facility for becoming well informed with regard to the latest improvements. It is a very common thing for them to send their children as pupils to those among themselves who are distinguished for their ability, and they willingly pay boards which would frighten our farmers. They hold frequent meetings for the purpose of mutually communicating their ideas and experiences. Those competitions of animals and implements, which the government of France is obliged to institute at the national expense, have long been established by private subscription in many places throughout the United Kingdom. The first noblemen, headed by princes of the blood, and even the husband of the Queen, consider it an honour to preside at these competitions and agricultural meetings, to take part in the discussions, and to contend for the prizes. A host of magazines, devoted entirely to agriculture, detail their proceedings; even the principal newspapers carefully chronicle all the news which may interest the chief of all industries. As poverty is not an attribute of agriculture in that country, no more is ignorance.

Besides the local societies, which have been long established over the whole of England, there has existed since 1835 a central Society of Agriculture, which has received the title, very rarely bestowed, of *Royal*. Although receiving no aid from the Government, it disposes of considerable sums, which it owes to voluntary subscriptions. It is composed of life members and annual subscribers, scattered over the whole kingdom. Among its life mem-

bers figure almost all the aristocracy and the principal country gentlemen ; the annual subscribers consist of the small proprietors and common farmers. The Society numbers no less than five thousand members for England alone—for Scotland and Ireland have their own societies —about one thousand being life members, and four thousand annual subscribers. The ordinary amount of annual subscription is £1, or 25 francs ; a life subscription £10 ; and £50 for what is called a Governor.

With these funds, which are increased by some additional resources, the Society possesses an annual revenue of £10,000, or 250,000 francs. This it applies to furthering the progress of national agriculture : it holds weekly meetings, at which the agricultural questions of the day are discussed ; it publishes an excellent collection of all that it considers worthy of notice ; it pays professors for instructing in those sciences relating to agriculture, and, among the rest, a chemist whose special duty is to furnish analyses of earths and manures. The Society holds every year—and this is the principal object of its foundation—a great meeting for competition in cattle and farming implements, to which the whole of England is invited. By all these means, this Society exerts a powerful and useful influence.

In France, farming is not a branch of industry, properly speaking ; there are few real farmers among us, and most of our cultivators, whether they be proprietors, farmers, or *métayers*, have but an insufficient capital. This is the real misfortune with us. The blame may, with some appearance of reason, be laid upon the small proprietary. With us, a cultivator, having a little money, generally prefers to be a proprietor rather than a farmer. The reverse is the case in England. Formerly there were many small proprietors in that country, who formed an

important class in the State; they were called yeomen, to distinguish them from the landed gentry, who were called squires. These yeomen have almost disappeared, but not by any violent revolution. The change has taken place voluntarily and imperceptibly. They have sold their small properties to become farmers, because they found it more profitable; and as most of them have succeeded, those remaining will most likely shortly follow the example.

Why do not many of our small proprietors do the same?—it is because they do not see their immediate advantage in it. The English yeomen, too, were a long time in making up their minds to the change. It requires favourable circumstances, which are not yet very generally apparent; and something more than the wish is needed in order to bring about agricultural revolutions. Likewise it is not so much the extension of the lease system, properly so called, as the want of capital to lay out on the land that is wanted. The superior advantage of the lease is apparent only where proprietors who farm with their own hands have not a sufficient capital. Where farming is the profession of proprietors who have all the requisites, the effect they produce is quite as beneficial as in the case of farmers. Proprietors have a direct, permanent, and hereditary interest in the improvement of the land, only they require a double capital, which is not often to be met with;—first, a capital as proprietors; and, secondly, another as cultivators. When there is this twofold condition, added to inherited experience, and that energy which is stimulated by a family name, there is no mode of farming which can compete with it, while there is no more desirable and better stamp of men for a State than these; and this is not to be overlooked.

The whole secret lies in these two words, Capital and Skill. Large farming, without skill and without capital, is not so useful as small farming, which possesses both, and *vice versâ*. There may be striking instances of capital and skill combined with large farming, and others where they are found with small; these differences decide the matter.

A time will certainly arrive when a goodly number of the small and even middling class of French proprietors will find it their interest to give up, more or less, being proprietors, and turn their attention to farming. Capital invested in land yields at the most two or three per cent, and when laid out in farming it ought to yield eight or ten, if judiciously employed: the result is evident. A host of small and middling proprietors will then disappear, who are now very badly off; but this revolution will never be general, nor is it necessary that it should. Small farming, like small property, is more in conformity with our national character. Capital with us being more distributed than it is in England, it is expedient that the farms should be smaller, so as to correspond with the working capital. Many of our proprietors would rather sell a portion of their properties than part with them altogether; and even supposing the latter done, very few would realise enough to be able to work a large farm advantageously.

The extent of farms, besides, is determined by other causes, such as the nature of the soil, the climate, and the kinds of crops prevailing. France, on this account, is still destined in a greater degree than England to be a country of small farming. Many branches of her agriculture require a great amount of manual labour, which renders it necessary to have a greater division of fields of operation. The great resource of pasture is less generally within our reach. Almost everywhere the soil of France

may be made to respond to the labour of man, and almost everywhere it is for the advantage of the community that manual labour should be actively bestowed upon it. I know parts of our country where small farming is the bane of the district; I know others where it is of inestimable benefit, and for which the large system could never compensate.

Let us suppose ourselves in the centre of France, in the Limousin mountains; we there find a soil poor and granitic, and a climate rainy and cold. Cereals there thrive badly, and do not pay the expense of cultivation; crops destined for industrial purposes are out of the question; it is rye which predominates, and that gives only a poor produce. Grasses and roots, on the contrary, thrive well. Irrigation is rendered easy by the abundance of streams, the fertilising properties of the water, and the slope of the lands; the breeding and fattening of cattle may be carried on under favourable circumstances. The soil and climate are nearly those of a large part of England. Everything in this quarter calls for large farming, but unfortunately, owing to circumstances foreign to the question of agriculture, it is the small which prevails, and there it is necessarily rather unproductive. Cereals exhaust the soil, for which insufficient manuring does not make up. The manual labour bestowed on the land is excessive, considering the results; cattle, badly fed and worn out by work, give no profit; rent is almost nothing, and wages miserable.

On the other hand, let us suppose ourselves in the rich plains of Flanders, on the banks of the Rhine, the Garonne, the Charente, or the Rhone; we there meet again with small farming, but, unlike the other, it is rich and productive. Every method for increasing the fruitfulness of the land and making the most of labour is

there known and practised, even among the smallest farmers. Notwithstanding the active properties of the soil, the people are constantly renewing and adding to its fertility by means of large quantities of manure collected at considerable expense; the breed of animals is superior, and the harvests magnificent. In one district we find wheat and maize; in another, tobacco, flax, rape, and madder; then again, the vine, olive, plum, and mulberry, which to yield their abundant treasures require a people of industrious habits. Is it not also to small farming that we owe most of the market-garden produce obtained by means of large expenditure around Paris?

We have seen that even in England small farming has not altogether been discarded, yet everything appears tending to proscribe its limits: it has no grounds of support, as in France, from a small proprietary and division of capital; the theories of agriculturists and the general system of farming are opposed to it. It has decreased since the days of Arthur Young, and the progress made by modern agriculture has been brought about by totally different means. Still it persists, and everything leads to the belief that in some parts, at least, it will maintain its ground. The manufacture of cheese, for example, which is quite a domestic industry, is well adapted to it: ten or twelve cows suffice to give profitable employment to a family in the country without extra assistance. There is nothing so delightful as the interior of these humble cottages, so clean and orderly; the very air about them breathes peace, industry, and happiness; and it is pleasing to think that they are not likely to be done away.

Even under circumstances most favourable to its development, the very nature of large farming prescribes bounds to it. The very large English farms, unless to a

great extent in pasture, are subject to manifest drawbacks. When cereals form a part of the cultivation, the distance to be traversed by men and horses, even with the improved means invented in the present day, becomes a serious loss of time and power. It is a difficult matter for the farmer to give his attention to different parts of the farm at the same time. I have seen farms of this description belonging to noblemen—home-farms, as they are called—and managed by stewards, which make a great appearance, but where the waste is proportionately great. The owners take a hereditary pride in these gigantic establishments, emblems of wealth and power; but in most cases they would be great gainers by letting them to real farmers.

If the necessity for employing every day a larger capital in farming, in order to increase the production required to meet the greater consumption, tends to diminish the number of small farms, it cannot fail to have a like effect upon the largest sized. They talk now in England of a working capital of £16 per acre, and it is probably not too much for the new methods every day suggested by the progress of agriculture. Now, if many cultivators who farm their own land find it difficult to command such a sum, it is no less rare, even in England, to find those who enter into large farming operations possessed of a capital of ten or fifteen thousand pounds. It is probable, then, that the number of large and small farms will become reduced at the same time, and that the middle-sized (150 to 300 acres), now the most common, will increase. This, in fact, appears to be the size best suited for the kind of farming most generally adopted, but that, properly speaking, is not large farming.*

* In general, it will be found that the best and most liberal description of farming in England is in occupations above three or four hundred acres.—J. D.

It is probable that in France, also, a similar revolution will take place, as the possibility of applying a larger capital to farming increases. Small farms will be entirely given up where they give no prospect of paying, and others will be formed anew where indications are given of profitable results. Finally, the average extent may, without inconvenience, be much less than in England; a radical change in farming is as little to be desired as it is in property. But again, this is not the real question: we have to inquire, not so much why farming and property are not larger, but why they are more profitable and more intelligent in England than in France?

CHAPTER IX.

COUNTRY LIFE.

In my opinion, this agricultural wealth is owing to three principal causes. That which first presents itself, and which may be considered the origin of the two others, is the taste of the wealthier and more influential part of the nation for a country life.

This predilection is not of yesterday's birth, but dates from the earliest history, and is a part of the national character. Both Saxons and Normans are children of the forest. Combined with a spirit of individual independence, those barbarous races, of which the English nation is composed, had all instinctively a turn for solitary life. It was not so, however, with the Latin people. Wherever the Roman spirit was preserved — in Italy, Spain, and, to a certain extent, in France—a predilection for town life was early manifested. The Roman fields were abandoned to the slaves; all who aspired to distinction resorted to the city. The name alone of peasant, *villicus*, was a term of contempt, and the name of city was associated with elegance and politeness, *urbanitas*. In the modern Latin communities these prejudices still prevail. In our own day we still look upon the country as a sort of exile, and it is still more so with the Italians and Spaniards. The desire of all is to live in town, for there intellectual enjoyment, refinement, society,

and the means of making money, are to be found. Among the Germans, and especially in England, the manners of the people are different. The Englishman is less sociable than the Frenchman; he still retains something of the wild race from which he is descended; he has a repugnance to being shut up within the walls of towns; the open air is his natural element.

When the barbarian tribes poured in from all sides upon the Roman Empire, they spread themselves over the country, where each chief, and almost every soldier, set about securing his own position. From this inherent disposition the feudal system took its rise, and in no country is this system more strongly marked than in England. The first care of the conquerors was to secure to themselves a great extent of land, where they could live without constraint, as in their native forests, adding to the pleasures of the chase that wealth which was derived from the cultivation of the land. The barbarian kings differed from their vassals only in the extent of their domains. Even in France the kings of the two earliest races were just large proprietors, living on extensive farms, as proud of the number of their cattle and the extent of their crops as of the host of armed men who marched at their command. The greatest of them all, Charlemagne, was no less remarkable for the administration of his country possessions than as chief of an immense empire.

This tendency, which is common among all northern races, was much more prevalent in England, when that country was less populous, less civilised, and not so much under the influence of Roman domination. As there was no learning among the people, there was nobody to contend for a town life; and the towns being only wretched villages, giving no inducement for pillage, rural possessions alone were envied. The only wealth of these

tribes was the land, and all they had to contend for was its use. The song of the Welsh bards, while sheltering themselves among their mountains against the attack of the Saxons, was, "Never shall we yield to our enemies the fertile lands watered by the Wye." The Saxons, in their turn, fought in defence of their lands against the Normans, and the first result of the great conquest of the eleventh century was a division of the land among the victorious invaders.

The paramount importance attached by the Normans to possession of the soil is exhibited in that extraordinary relic which shows the mind of the conquerors; it is unique of its kind, found only in England, and has exercised a great influence on the subsequent development of the country. I mean that general survey of properties, executed about the year 1080, by order of William the Conqueror, and called by the dispossessed Saxons *Doomsday Book*, because it established for ever the almost entire dispossession of their race. This book, still preserved in the Exchequer, is the starting-point of English property, and to this day continues to be the great authority on rights of tenure, no title being strictly legal except that which may be traced back to this first source. No nation can boast of the possession of a record so ancient, so detailed, or so authentic. About fifteen years had elapsed after the battle of Hastings when *Doomsday Book* was commenced. The new proprietors had been for some years settled on their estates, and most of them were already engaged in agriculture. They reared a great number of horses and cattle; an old record of the time, making mention of one of them, says, *Multum agriculturæ deditus ac in jumentorum et pecorum multitudine plurimum delectatus.* The work ordered by William had for its object not only the registration of the names of

the possessors, but to set forth in detail the number of measures of land, or *hydes*, as they were then called, the number of domestic animals, ploughs, &c. The inquiry lasted six years, and proves a pretty fair advancement in agriculture. The record includes all the country actually subdued to the Norman rule; that is to say, the whole of England as far as north of York. The Northumberland mountains (and Durham) alone were excepted.

During the middle ages the whole history of England is taken up with contentions between the barons and the Crown, respecting the possession of their lands. At one time (in 1101) they obtained from Henry I. an edict thus worded, "I concede in fee simple to all knights who defend themselves with helmet and sword the free possession of *the lands cultivated by their seignorial ploughs*, in order that they may provide themselves with arms and horses for our service and the defence of the kingdom." A century afterwards (in 1215), they took advantage of John's weakness, and forced him to sign the Magna Charta, confirming their right of property, and enabling them to defend it in the sovereign assemblies. Forced to seek support from the entire population, in order to overcome the opposition of the sovereign, they took care at the same time to stipulate for certain rights for the commons, and thus it is that the origin of English political liberty is mixed up with the rights of feudal property.

From the days of King John until now it is always among the rural population that the true national character—the fighting people—is to be found; the towns show nothing of it. The sovereigns themselves, yielding to the national feeling, seek less than elsewhere to diminish the power of the feudal lords. Notwithstanding the absolute power enjoyed by Henry VIII.,

when he suppressed the convents he felt himself obliged to distribute among the nobles a portion of the spoil taken from the monks. This accounts for the immense properties owned by some families. When his daughter Elizabeth beheld these same nobles leave their country mansions to flock to her court, she herself recommended them to return to their lands, where they would enjoy more consequence. "You see," said she, "these ships accumulated in the port of London; they have no stateliness here with their sails loose, their holds empty, and all huddled together without order; but see them with their sails filled and spread over the wide ocean, each will then be free, powerful, and majestic." A picturesque and true comparison this, but one which Elizabeth's contemporary, Henry IV., and his grandson Louis XIV., could never have made.

During the revolution of the seventeenth and the political agitation of the eighteenth century, the country aristocracy continued to maintain its ascendancy: it was they who established the authority of 1688, who kept the house of Hanover upon the throne, and who sustained the contest against the French Revolution. Until the Reform Bill gave a greater representation to the towns, which had become rich and more populous, the two Houses of Parliament were entirely composed of this party; at this moment they are still labouring energetically to maintain their threatened supremacy, and to hold the new reformers in check. All the great and glorious incidents in the national history are connected with this class,—hence its popularity. A country life is sought after, not only for itself—for its absence of restraint, its comfort, quiet occupation, and domestic happiness, those cherished *penates* of the English—but in addition it gives consideration, influence, power, every-

thing that a man can desire after his first wants are satisfied.

There are certain privileges attached to landed property. The wealthiest proprietor in a county is usually lord-lieutenant, which, although more an honorary title than anything else, invests its possessor with somewhat of a regal consequence in the county; the wealthiest after the lord-lieutenant are justices of the peace. These are the principal, and almost the only, administrators of justice in the county, the representatives of public authority. In France, public officers are almost all strangers to the department where they are employed; they are bound by no ties to local interests. In England, on the other hand, the landed proprietors are the functionaries in their own district; and although nominated by the Crown, they hold office from the fact alone of their being proprietors. There is probably no instance of a commission of justice of the peace being refused to a wealthy and influential landed proprietor.

It is easy to understand how such a system gives consequence to a person residing on his own property. In France, when a proprietor is ambitious of playing a part, he must come away from his estates; in England he must remain upon them. Therefore everybody in that commercial and manufacturing country desires to become a landed proprietor: those who make fortunes buy land, and those who strive for riches aspire only to follow the same course. The rage in this respect goes so far, that when a man has had the misfortune to be born in a town, he tries to conceal it as much as possible. Everybody would be born in the country, because a country life is the mark of an aristocratic origin; and when a man happens not to have been born there, he wishes at least to die there, that his children may inherit the

prestige. Look at a list of the House of Lords in the official publications ; it is their country residences, and not their town addresses, which follow their names. The Duke of Norfolk is put down as residing at Arundel Castle, in the county of Sussex ; the Duke of Devonshire at Chatsworth, in Derbyshire ; the Duke of Portland at Welbeck Abbey, in Nottinghamshire, and so on. Every Englishman is familiar with the names, at least, of the residences of the nobility, which are as famous even as the names of the illustrious families who possess them. Independently of the magnificence there displayed by their possessors, some of them are connected with the glory of the nation. The name of the Duke of Marlborough is inseparable from that of Blenheim, a magnificent mansion given by England to the conqueror of Louis XIV.; and a like origin associates the manor of Strathfieldsaye with the remembrance of the Duke of Wellington's victories.

It is the same with the members of the House of Commons as with the Lords. All those who have country houses take care to have them indicated as their habitual residences. Everybody knows the name of Sir Robert Peel's country-seat—Drayton Manor. Appearances in this respect are quite consistent with fact, for members of both Houses are scarcely more than visitors in London during the sitting of Parliament ; they pass the rest of their time in the country, or in travelling. Show and splendour are reserved for the country ; and it is there more especially that an interchange of visits, fêtes, and pleasure-parties, takes place.

The national literature, as expressive of manners and customs, contains throughout marks of this distinctive trait in the English character. England is the country of descriptive poetry ; almost all their poets have

lived in the country, and sung of it. Even when English poetry took ours for its model, Pope celebrated Windsor Forest, and wrote pastorals: if his style was not rural, his subjects were. Before him Spenser and Shakespeare wrote admirable rustic poetry; the song of the lark and nightingale still resounds, after the lapse of centuries, in Juliet's impassioned farewell to Romeo. Milton—the sectarian Milton—employed his finest verse in a description of the first garden, and in the midst of revolutions and business his fancy carried him towards the ideal fields of *Paradise Lost.*

But it was principally after the Revolution of 1688, when England, now free, began to be herself, that all her writers became deeply impressed with the love of country life. It was then that Gray and Thomson appeared; the first in his celebrated *Elegies,* and among others his "Country Churchyard," the other in his poem of the *Seasons,* striking in delightful sounds this favourite chord of the British lyre. The *Seasons* abound with admirable description; it is sufficient to instance the hay-making harvest and sheep-shearing, the latter being already in Thomson's time a great business in England; and among the pleasures of the country, his account of trout-fishing. The angler, at the present day, may find in this little descriptive picture his favourite art fully detailed. The feeling is everywhere lively and spontaneous—enthusiasm, real and deep, for the beauties of nature and the sweets of labour. To these Thomson joins that quiet high religious feeling which almost always accompanies a solitary and laborious life, in the presence of the never-ending wonders of the vegetable creation. It pervades the whole poem, especially in the concluding part, where he likens the awakening of the human soul after death to nature after winter.

It was at the very time when desertion of the country with us had reached its height that Thomson was celebrating its praises: this was in 1730. The nobles, attracted to court by Richelieu and Louis XIV., at last gave up all thoughts about their paternal estates in the orgies of the Regency. Agriculture, enfeebled by the extravagances of Versailles, gradually lost all vitality; and French literature,* having other topics to occupy it, could only afford to the cultivation of our land this terrible description of La Bruyère, which will ever remain as a cry of remorse from the Great Age: "We behold throughout the country a set of ferocious-looking creatures, both male and female, dark, livid, and scorched with the sun, attached to the land which they dig and grub with an untiring pertinacity: their voice has a resemblance to that of man, and when they rise on their feet, they exhibit a human countenance; they are, in fact, men. At night they retire to dens, where they live upon black bread, water, and roots. They save other men the labour of sowing and reaping, and certainly do not deserve to be without that bread which they themselves have sown."

In the *Henriade*, which made its appearance about the same time as the *Seasons*, it is mentioned that there was not even grass for the horses. This total neglect of nature continued up to the time when English ideas began to find general favour in literature and society; that is to say, the years which preceded the Revolution of 1789.

The English novels of the eighteenth century in some way interest all in favour of a country life. While France was busy with the stories of Voltaire, and the romances of the younger Crébillon, England was reading the *Vicar of Wakefield*, *Tom Jones*, and *Clarissa*. Goldsmith, describing Mr Primrose, says, "The hero of this piece unites

* We must except Fontaine, who had an ardent love of the country.

in himself the three greatest characters on earth: he is a priest, a husbandman, and the father of a family." This sentence embraces a set of ideas peculiar to Protestant and agricultural England. The whole romance is only a commentary upon it; it is a picture of the interior of a poor country clergyman's family. The Protestant minister, with a wife and children, has other duties than the Catholic priest; he must support his family, and this necessity obliges him to combine temporal work with his spiritual occupations. The farm which Mr Primrose rented was only twenty acres, but it satisfied his ambition; he cultivates it with care, assisted by his son Moses, while his wife, *who had not her match for gooseberry wine*, prepares the simple repast of the household. On Sunday, when the weather is fine, the family, after Divine service, go and seat themselves under a shady bank of hawthorn and honeysuckle; the table-cloth is spread upon a heap of hay, and they dine happily in the open air; while two blackbirds in opposite hedges answer to each other's notes, and the tame robin comes and pecks the crumbs from the fair hands of the vicar's daughters. It is in the midst of one of these happy scenes that the hunted stag is run down, and the lord of the manor upon his horse makes his appearance.

In other novels, the heroes are all represented as living in the country. Among others, Mr Western is a type of the *squire*—great hunters and drinkers, according to all accounts. As we approach our own time, the love of natural scenery becomes more and more general, and is taken up by the arts. Poets sing only of the beauties of English landscape, painters represent only farm scenes. The lakes, with their wild scenery, give inspiration to a special school. The more war rages on the Continent, so does the natural love of contrast in man turn the mind

of the nation all the more to the peace and security of rural life. When revolutions disturb the world, it is then especially that the mind seeks to breathe the freshness of natural scenery. England enjoys long draughts of this happiness; a common feeling of disapprobation and security leads her back to conservative ideas and agricultural habits.

Among others, hear what Coleridge says of this national felicity, defended by the ocean :—

> " O Albion ! O my mother isle !
> Thy valleys, fair as Eden's bowers,
> Glitter green with sunny showers;
> Thy grassy uplands' gentle swells
> Echo to the bleat of flocks ;
> (Those grassy hills, those glittering dells,
> Proudly ramparted with rocks),
> And ocean, mid its uproar wild,
> Speaks safety to his island-child.'

A traveller in England, forty years ago, facetiously remarked, " I would not advise the cottages there to attack the mansions, for as the latter are twenty to one, the former would soon be overwhelmed." With still greater truth might the same remark be made at the present day, for the wealthier habitations have gone on increasing. The same individual remarked, that in England the poor are swept like a heap of rubbish into a corner. The expression, though harsh, conveys a true picture of the appearance of the country in England, for poverty appears to have been all swept into the towns. Just as elsewhere great attention is paid to the handsome parts of large cities, so in England it is the country from whence everything that may offend the eye is removed, that the mind may have only peace and contentment to dwell upon.

In travelling through England, one cannot help being constantly impressed with the contrast between town and

country, so different is it from what one meets with in France and the Continent generally. The largest towns, like Birmingham, Manchester, Sheffield, or Leeds, are inhabited only by workmen and shopkeepers, and the parts of the town occupied by their dwellings have a poor and melancholy appearance. Few or no ornamental buildings ; little or no luxury ; nothing to be heard but the noise of trades, and nothing but busy people to be seen. The stranger as well as the inhabitant hastens to get out of the smoke and dirt, to breathe beyond it a purer air, and to escape the sight of that incessant work which does not always keep away misery. In London, even, the people think more of business than pleasure ; and this is the reason why our good Parisians find themselves so much out of their element there ; they do not meet with congenial tastes in London.

I never experienced this difference so much as in going from Chatsworth to Sheffield. Chatsworth is one of the finest of those princely residences of the English aristocracy, where such kingly luxury is displayed. This splendid palace is surrounded with a finely-timbered park of several leagues in circumference, stocked with deer, sheep, and cattle, all grazing together. Fountains, artificial cascades, and ornamental basins, almost rival the celebrated decorations of Versailles and St Cloud ; an immense conservatory constructed with iron and glass, and which gave the idea for the Great Exhibition building, contains quite a forest of tropical trees ; an entire village of handsome cottages, picturesquely situated, has been built by the proprietor for his workmen and labourers ; the river Derwent, winding beautifully through the park, seems almost as if it were designed by art ; and encompassing this scene, already so grand, are the Derbyshire mountains, forming a magnificent horizon to the whole :

everything there has an air of wealth, luxury, and power. Once beyond the barren ridge which separates you from the country of York, and arrived at the neighbouring town, everything changes. Nothing but blazing furnaces, hammers, and anvils, chimneys vomiting thick smoke, a population of blacksmiths moving about like spectres amidst flames: one may compare it to the infernal regions at the gate of paradise.

The Duke of Devonshire's mansion is a specimen, on a large scale, of all the residences of country gentlemen in England. Every proprietor of any consideration has his park; the park—the forest, on a small scale—is the sign of feudal possession, the necessary appendage to the mansion. The number of parks in England is enormous, varying in size from many thousand to only a few acres. The largest, the oldest, those which alone deserve the name of parks, are laid down on all the maps. Within the bounds of the park, even those of the most modest pretensions, game of all kinds is preserved, and cattle grazed. The proprietor enjoys quite a pastoral scene from his own windows, and can take rides along his own avenues, or enjoy his shooting at a few paces from his own door. Here he lives in the bosom of his family, far from the tumult of life, imitating the life of the nobleman, as the farmer does that of the independent gentleman.

The passion of the English for country sports is well known. Those country gentlemen who cannot afford to have a pack of hounds of their own, unite to keep one by subscription. The hunting-days are advertised beforehand in the newspapers, and subscribers assemble on horseback at the appointed place. At certain seasons, fashion attracts thousands of these red-coated hunters to particular parts of England or Scotland to enjoy this sport, which involves actual danger. Sometimes it is the

fox they hunt at Melton Mowbray, in Leicestershire; at other times they shoot grouse on the most inaccessible of the Highland mountains. All England is taken up with these amusements; the newspapers publish the names of the best shots and the most skilful riders, also the number of head of game killed. When the shooting season begins, Parliament breaks up. Women even prefer these amusements to all others: give a young English girl her choice between a ride on horseback and a soirée or a ball, there is no doubt about which she will prefer; and there is nothing delights her more than a gallop across the country.

When a man has not the good fortune to possess a country place of his own, he will at least have it in appearance. Every town has its public park, which is just a large grass field with fine trees in it. In London, cows and sheep are to be seen quietly grazing in the Green Park, or Hyde Park, amidst the incessant noise of carriages passing along Piccadilly. The man constantly occupied in business may at least see, in passing, a corner of Eden. It is the desire of all to have their place of residence as far as possible from the heart of the town, so as to be nearer the fields; and in the summer all escape as soon as they can, to visit a friend at his farm, or to make a few days' tour in some pretty part of the country. Wherever the scenery is at all picturesque, there the people flock to enjoy that quiet happiness peculiar to the English. The favourite trip is into Scotland, where one may breathe the pure air of the heather hills, and picture to himself the roving life of the caterans, as described by Sir Walter Scott.

The English sovereigns show the first example for this universal predilection, living as they do as little as possible in town. The fancy farm of Trianon was but a

shortlived amusement to Louis XVI. and Marie Antoinette, but Queen Victoria and Prince Albert take a real pleasure in farming. The Prince has a farm at Windsor, where the finest cattle in the three kingdoms are bred and fattened. His produce generally gains the first prizes at the agricultural shows. At Osborne, where she spends the greatest part of the year, the Queen herself takes great interest in her poultry-yard; and the newspapers have lately announced a cure which her Majesty has discovered for a particular disease among turkeys. We may laugh at this, but our neighbours take it very seriously, and they have good reason for doing so too. Happy and wise among nations is the people which loves to see its princes engaged in useful relaxations!

The beneficial effects produced upon the land by the habitual residence of families at their country places may easily be conceived. While, in France, field-labour goes to pay for town luxury, in England town-work pays for the luxury of the country. Almost everything which the most industrious nation in the world can produce is there consumed, to the benefit of farming. The more a proprietor lives on his property, the more disposed is he to keep it in good order. Pride is the great stimulus. A man does not like to let his neighbours see buildings in ruins, bad roads, defective harness, ill-conditioned cattle, neglected fields: he therefore lays out his pride productively, just as elsewhere it is spent in folly from the force of example. In England, a man has his pretty country place just as in Paris they have their fine hotels and rich furniture.

Taxation itself, which, in France, has an exhausting influence upon the land, has quite a different effect in England. All direct taxes are spent upon the spot where they are collected. The poor-rate and tithes are scarcely

paid by the farmer before they are again returned to him in exchange for his produce. Other taxes in the same way go to pay for works of local benefit. Half the indirect taxation being absorbed in payment of the public debt, which belongs for the most part to the landed proprietors, it also in a great measure comes back to the country residents. While a third, at least, of the French budget finds its way to Paris, and another third to the provincial towns, three-fourths of the public expenditure in England is expended in the country, and, with the incomes of proprietors and farmers, contributes to diffuse there abundance and life.

We, alas! are far from such a state of things; let us hope that it will be brought about by degrees. Of late, everything seems tending towards it. The overcrowding of the wealthy class in the towns, the uncertainty of the careers they there come to pursue, the feverish air they breathe, all tend to cause disappointed ambition and tired hopes to revert to country life. Those who have enough to keep them comfortably in the country are coming to the conclusion, that the safest and best course is to reside there; and those who do not see this, are very nearly being forced to it by the constantly increasing difficulty of finding an opening in the town. Besides which, there is a new element at work tending to effect an entire change in country life: improved means of communication, and especially the extension of railways, by shortening distances, make a constant residence in the country compatible with the pleasures of society, and prevent it interfering with a man's public importance, cultivation of mind, or the amusements of town life. This will be the beginning of a healthy revolution in favour of our deserted fields. We shall probably never be so rural in our habits as the English; our towns will never, like theirs, become

simply workshops of commerce and manufactures; but provided we have a majority of the wealthier class again inhabiting our deserted manors, the change will be a beneficial one.

As to taxes, it will be no less difficult to divert the current which carries these towards Paris and the large towns; but if anything can mitigate this perpetual drain, it is a residence of the influential proprietors on their estates, where they would protect their own interests a little more, if they were in the habit of looking more closely into them.

CHAPTER X.

POLITICAL INSTITUTIONS.

The second cause of progress forms really only a part of the first, although its action is different. This is the good public feeling of the English, which, for more than a century and a half, has preserved them at once from the power of despotism and from revolutionary disorders—both so fatal to every kind of labour. Nothing like the latter half of Louis XIV.'s reign, the entire reign of Louis XV., and the miseries of the Revolution, has afflicted this favoured nation. The eighteenth century, so disastrous to us from beginning to end, was for her a period of continuous advancement; and when we began our not uninterrupted course, she was three quarters of a century in advance.

Two hundred years ago, France, in agriculture as in everything else, was the farthest advanced of the two. The twelve years which elapsed from the peace of Vervins to the death of Henry IV., formed perhaps the brightest of those short periods of prosperity which appear at distant intervals, brief and rare, in the dark and bloody course of our history. The annalist has few events to chronicle during those years, apparently so blank; they are not remarkable for either wars or passages of historical note. But the popularity of Henry IV., the only king the nation ever loved, sufficiently shows what they were.

To be sure, Sully was not without his faults. His pride, cupidity, and avarice would have rendered him unbearable, had he lived in our day ; even for his own time, he was excessively prejudiced : he hated commerce and manufactures, then beginning to dawn ; but fortunately he failed in his efforts to prevent the introduction of silk into France. Still, with all his faults, he was right in one thing—he understood the importance of agriculture, if he mistook that of commerce ; and his encouragement sufficed to provoke an agricultural expansion, surprising for that period.

Oliver de Serres, a contemporaneous writer, has left us an admirable work, testifying to the general movement which then took place. The *Théâtre d'Agriculture* appeared in 1600 : its author was a noble Protestant, lord of Pradel, in Vivarais, who lived a retired life upon his own estates during the period of religious and political convulsions. His work, which he dedicated to Henry IV., is both the best and oldest treatise on agriculture which exists in any modern language. His name is one of the glories of France : succeeding times forgot him ; and when, fifty years ago, he was again brought to light, after another general peace gave an impetus to labour, it was truly a resurrection. This is the way we reward our great men. All the good systems of agriculture were known in Oliver's time ; he gives directions which might be adopted by our agriculturists at the present day : production made rapid progress in the course of a few years, "*to the great profit of your people,*" he says, addressing the king in his dedication, "*dwelling safely under their fig-tree, cultivating their land, and who, under shelter of your majesty, have justice and peace dwelling with them.*"

The fatal genius which rules our destinies did not long

permit this beneficial quiet. The assassination of Henry IV. again plunged France into chaos ; but the results of this short period of hope were experienced throughout the whole century, and the greatness of Richelieu and Louis XIV. was in a measure due to the good seed sown at that time. All historical records testify to our country districts being then inhabited by a numerous nobility, whose interests were bound up with those of the rural population ; the fatal separation which lost all, did not take place until a subsequent period.

Civilisation, during the middle ages, proceeded always from south to north. Agriculture, like the arts, flourished first in Italy. Provence and Languedoc were in early times the best cultivated parts of France, as being nearest to the sun. Oliver de Serres was born on the confines of these two provinces. Great Britain, situated much farther off, did not receive the impulse till later. After Elizabeth's reign, that country was still in a barbarous state. Guichardin, in his time, estimated the population of England proper at two millions only,—others call it four ; now it is sixteen. Three-fourths of the land lay uncultivated. Bands of desperadoes devastated the country. The nation, convulsed, sought to be at rest ; but it was necessary that it should pass through a long series of revolutions before settling down ; and meantime agriculture, like other things, suffered. During the whole of the seventeenth century, France sold corn to Great Britain.

After 1688 everything changed. Clouds gathered over France, now exhausted by the follies of Louis XIV. England, on the contrary, revived and renewed in youth, took a start which was never to be arrested. Instead of advancing, the population of France fell off, while that of England rapidly increased. Boisguillebert, Vauban,

and all records of the time, prove the progressive decline of French agriculture. England, on the contrary, which, under the Stuarts, did not produce enough for its own wants, became a hundred years later the granary of Europe. Although she had to feed twice the amount of population, and this population living much better than before, she sold to foreigners five hundred thousand to one million quarters of corn, which is enormous, considering the means of transport at that period. It is calculated that during the last half of the eighteenth century England sold to her neighbours, and especially to France, one milliard of francs (£40,000,000) worth of cereals.

What a prosperous state of things this for her, and for us how much the reverse during that fatal period! In the first place, the terrible War of the Succession, the cruel defeats of Blenheim, Ramillies, and Malplaquet, the very existence of France jeopardised, and saved as if by miracle at Denain; then the Seven Years' War, more disastrous still, the defeat of Rosbach, the loss of our fleets and colonies, the ministry of Lord Chatham raising upon our ruins the glory of his own country; the credit of the British nation founded upon a long series of success, ours destroyed by the extortions of tyrants, and the mad Mississippi Scheme. The English people, happy and proud of their government, becoming more and more attached to it, and confidently applying themselves to labour, under protection of its laws and its victories; ours, ruined, humiliated, oppressed, renouncing useful occupations, the profits of which were absorbed by the exchequer, and feeling only hatred and contempt for its rulers.

Agriculture, like manufactures, requires especially security and freedom. Of all the evils which can come upon it, none is more fatal than a bad government. Revolutions and wars afford it some respite, but bad government

leaves it none. We have sufficiently authentic evidence to prove into what a state French agriculture had fallen, a century ago, under the deleterious influence of a detested régime, in the articles *Grains* and *Fermiers* (Corn and Farmers) of the *Encyclopédie,* written about 1750, by the founder of political economy, Dr Quesnay. Our whole territory (Corsica and a part of Lorraine did not then belong to France) was estimated by Quesnay at a hundred millions of *arpents* of fifty-one *ares,** which is confirmed by our present land registry. Out of these one hundred millions of *arpents,* he estimated the arable land at only thirty-six millions, or forty-five millions of acres, of which eight million acres were under what he calls large farming, and thirty-seven in small. By *large farming* he means that of farmers who used horses for tillage, and who followed the triennial rotation—wheat, oats, and fallow ; and by *small* that of the *métayers,* who employed cattle, and followed the biennial rotation, wheat and fallow. This division ought to be quite correct, for it still corresponds with the existing state of things. France continues still divided into two distinct regions ; the one in the north, where the lease system prevails, tillage by horses, and triennial rotation more or less modified ; the other in the south, where small holdings predominate, labour by cattle, and biennial rotation. Only, since 1750 the first has gained ground, and the latter has declined.

Quesnay estimates the average produce in corn of an *arpent,* under large farming, at five *setiers* of 156 *litres,* deducting seed, and at two and a-half *setiers* that of the small—say seventeen bushels per acre for the one, and eight and a half for the other,—or altogether, for the

* 40.466 *ares* = 4840 square yards, or 1 English acre ; 51 *ares* = about 1¼ acres English.

million hectares of wheat sown under the large cultivation, and seven and a half millions of the small, seventy millions of hectolitres (twenty-four million quarters for twenty-one million acres). Under the name of corn is included, in addition to wheat, inferior grain, such as rye and barley; the same confusion is still common in many parts of France. As rye was more generally cultivated at that period than wheat, these seventy millions of hectolitres may be thus approximatively apportioned—twenty-five millions wheat, and forty-five of rye and barley. Quesnay adds to this, for the breadth of oats, seven millions of *setiers*, or about eleven millions of hectolitres. At the present day the production of wheat has almost tripled, that of rye and barley remains the same, and oats have quadrupled: in 1750, potatoes were scarcely known; the valuable addition which they furnish for the food of cattle and men was then entirely wanting. Few dry vegetables were cultivated, and many other products, which are at this day a source of wealth, did not then exist.

According to Quesnay, the number of horned cattle was five millions, or just half of what we have now. As to quality, they were much inferior. The number slaughtered for human food was four to five hundred thousand annually, now it is ten times that number; and the cattle of that period, having to seek their own subsistence on the arid wastes, bare fallows, and swampy meadows, could not be compared in weight to those of the present day, which are fed on sound grass, or stall-fed upon roots and artificial fodder. The cattle in some of the mountainous regions, where the old system still prevails of feeding them on the coarse natural pasture, may give an idea of all the cattle of that period. Sheep were certainly neither more numerous nor propor-

tionately better. The number of pigs might have been proportioned to the population. As to horses, we know that Turgot, when he wished in 1776 to reorganise the Posts, could not procure the six thousand draught-horses he required. Quesnay makes only a passing remark about the vine; Beausobre estimates the annual production of wine in 1764 at thirteen million hectolitres* (343,000,000 gallons), or a third of our present production. Upon the whole, reckoning the production then at the price of the present day, we find the total amount to be 1,250,000,000 francs (£50,000,000) at most, as the value of French agriculture in 1750.

The population also, although it was not more than sixteen to eighteen million souls, had reached a degree of wretchedness beyond all belief. The condition of the masses was frightful; and the upper classes suffered scarcely less amidst the general poverty. Vauban, in his *Dîme royale*, gives a picture of French society which makes one shudder. According to the calculation of Quesnay, the net revenue of the landed proprietors amounted to 76,000,000 of livres for the corn-lands, and, including the vineyards and other productions, the amount may be doubled: the livre then was about the value of a franc now. The farms were let for large cultivation at 5 livres per *arpent*, and for small at 20 and 30 sous—say, for the first, 3s. 6d., and the latter 9d. to 1s. per acre. Dupré de Saint-Maur, who was a contemporary of Quesnay, even says that in Berry, part of Champagne, Maine, and Poitou, the farms let at only 15 sous per arpent, or 6d. per acre, and at this rent the farmers had great difficulty in making a livelihood.

A frightful testimony, among many others, to this general destitution is found in the Memoirs of the Mar-

* Hectolitre = 26⅜ wine gallons.

quis d'Argenson, who thus wrote in 1739, five years before his appointment as Minister of Foreign Affairs to Louis XV.: "The real evil—that which undermines the kingdom, and cannot fail to bring ruin upon it—is, that at Versailles they shut their eyes too much to the distressing state of things in the provinces. In my own day I have observed a gradual decrease of wealth and population in France. We have the present certainty that misery has become general to an unheard-of degree. While I write, in the midst of profound peace, with indications, if not of an abundant, at least of an average harvest, men are dying around us, like flies, of want, and eating grass. The provinces of Maine, Angoumois, Touraine, Haut-Poitou, Périgord, Orléanais, Berry, are the most wretched, and the distress is advancing towards Versailles. The Duke of Orleans lately laid before the Council a piece of bread, which we got for him, made of ferns: in placing it upon the king's table, he said, '*Sire, here is what your subjects live upon.*'"

This is the abyss from which France has had to rise, and therefore it is not to be wondered at that, after a century of endeavours, her wounds should not have been completely healed. During this century, agricultural production has quadrupled, population has doubled, rents have risen from 150,000,000 to 1,500,000,000 francs, or in the proportion of one to ten. This is enormous progress; and if our starting-point had not been so low, it would have sufficed, and been more than enough, to have enabled us to keep our proper position. No other nation except England has made as great progress in so short a time; and, besides, circumstances during that time were not always favourable. About fifty years out of the hundred were disturbed by horrible revolutions and bloody wars. We had no really good times, excepting the reign of

Louis XVI., the Consulate, and the thirty-two years of constitutional monarchy.

The regenerative movement began to be felt after the peace of 1763, through the preaching of economists in favour of free trade in grain. Quesnay's articles in the *Encyclopédie* point out both the wide extent of the evil and the remedy for it. All the after-progress of national agriculture was anticipated in these two articles. It required some time before the new doctrine spread and took root. Meanwhile old notions disappeared. On the accession of Louis XVI., hopes of a better state of things began to dawn. Turgot was the first to extend a helping hand to the tottering fabric. Considerable reforms had already been made previously to 1789; free scope had been given to labour, and free trade in corn proclaimed. The Constituent Assembly, in its first deliberations, finished what had been so well begun. The nation breathed at last. If France of 1789 had known where to stop, as England did in 1688, its general prosperity from that time would no doubt have prodigiously increased.

The lamentable *bouleversement* which followed those days of hope repressed the growing progress. After an ordeal of ten years, the Consulate afforded some respite to the country, and the movement, suspended during the revolutionary storms, again broke forth with a power not to be repressed. The happy days of the peace of Vervins returned. But a fresh evil unfortunately arose again to retard this advance: the fatal wars of the Empire began, capital again became dispersed, population was once more decimated upon fields of battle; it seemed as if the great principles sown under Louis XVI. were never to arrive at maturity. France had only got a sight of peace and liberty to see them vanish. It is really only since

1815 that the labouring power of the nation has been allowed to develop without hindrance, and what the result has been is well known.

We must go back to the reign of Charles I. to find in England a condition corresponding to the state in which France was a hundred years later. A marked advance took place from 1750. Representative government was established, and agricultural prosperity increased under it. That country, which produced hardly two millions of quarters of wheat under the Stuarts, was already reaping double in 1750, and was destined to increase progressively to thirteen, which it now produces. Meat, beer, wool, every agricultural commodity, followed the same movement. But besides this, while the rest of Europe was languishing under oppression, liberty and security were shedding their genial rays over the fields of Britain. With the opening of the eighteenth century, Thomson celebrates these sacred blessings as the foundation of all the rest. "Liberty," he says, "reigns here in the humblest cottage, and brings with it plenty." Elsewhere he exclaims, addressing England, "Thy fields abound in riches, the possession of which is secure to the contented labourer." For a hundred and sixty years the noble institutions which give liberty and protection to persons and property have existed without interruption, and for a hundred and sixty years prosperity has followed in their train.

At the end of the eighteenth century, when the revolutionary wars began, English agriculture was farther advanced than ours at the present day. This is proved by many documents; among others the investigations of Pitt, at the time he established the income-tax, and the researches of Arthur Young and Sir John Sinclair. In

1798, Pitt estimated the total revenue from land in England and Wales at £25,000,000, and the income of the farmers at £18,000,000. This gives an average of 13s. 6d. per acre for rent, and 10s. for profit. It is very doubtful, taking even the richest half of France, that a similar result could be obtained at the present day. A labourer's wages at that time were, on an average, 7s. 3d. per week, or 15d. per working day; and in many places they were as high as 9s. and 10s., or 20d. per day. It is again doubtful, taking still the best half of France, whether agricultural wages are at this moment as high, and the price of provisions then in England was rather below than above what it is now in France. The value of house property amounted, according to Dr Beeke, to £200,000,000; that of land, according to the same author, to £600,000,000, or equal to £16 per acre, and at that estimate they were giving an average return of four per cent.

Such were the fruits of an age of free and unimpeded development, notwithstanding some casual disasters, such as the American War. In the half-century which followed, from 1800 to 1850, the population has again doubled, and agricultural production has made almost an equal progress, in spite of the frightful struggle which occupied the first fifteen years. Not only did constitutional England succeed at last in conquering that despotic power and genius, which was armed with the whole strength of a nation greatly more numerous and more warlike than herself, but the steady increase of her internal wealth was not sensibly retarded by the violence of the struggle. Never were enclosure bills, for turning uncultivated lands to account, more numerous than during the war with France. It was then that the Norfolk

rotation made its greatest conquests, the doctrines of Bakewell and Arthur Young received a more general application, and large proprietors, such as the Duke of Bedford, Lord Leicester, and many others, were so greatly benefited by their large estates.

Scotland and Ireland did not share an equal prosperity in 1798, because they were less well governed. Pitt estimated the wealth of Scotland at an eighth of that of England. As the Highlands ought to be taken at scarcely anything in this calculation, this would give an average for the Lowlands of 7s. for the rent, and 4s. for profit per acre; but in fact Scotland has not enjoyed much order and liberty except for the last fifty years. When treating of Ireland, we shall be better able to judge of the consequences due to the absence of liberty and security.

It is perfectly evident, then, that both in France and England agricultural development has followed in the train of good government. The rural change which took place in France between 1760 and 1848, had already taken place in England between 1650 and 1800; the producing causes in both cases were the same. The difference between England under the Stuarts and in the time of Pitt, is the same as that of France under Louis XV. and Louis Philippe. But this does not apply to France and England alone. In ancient as well as in modern times, agricultural prosperity came and went with the mode of government. Republican Rome cultivated its fields admirably; enslaved Rome neglected them. Spain, during the middle ages, did wonders in cultivation, while the Spain of Philip II. ceased to work. Switzerland and Holland fertilise rugged mountains and hopeless marshes; the Sicilian starves on the most fertile

soil. As Montesquieu remarks, in his *Esprit des Lois*, "It is not fertility, but liberty, which cultivates a country."

Liberty has been all the more influential in England, owing to its not having been accompanied by those disorders which have too often tarnished and disgraced it elsewhere. Notwithstanding those apparent agitations which, with the most sober-minded people, the exercise of political rights always involves, the basis of English society remained tranquil. Changes which time brings about, and which constitute the life of nations, have been effected imperceptibly, and without any of those violent shocks which are always destructive to capital: even the event of 1688 had the least possible of a revolutionary character. This national moderation is usually ascribed to aristocratic influence. No doubt aristocracy had its weight in the matter, but so far only as its influence in society extends. For a long time past the British Government has seemed to be more aristocratic than it really was, but now even the appearance diminishes daily.

The true ballast of the body politic—the salt of society, that which holds it together—is the country feeling. This feeling, no doubt, is of an aristocratic kind, but it is not aristocracy itself; both may exist independently. British aristocracy has made common cause with the country feeling, and this is what constitutes its strength; French aristocracy holds itself aloof from it, and herein lies its weakness. In England, the country life of the upper classes has, in the first place, produced energetic and high-minded habits, out of which the constitution has taken its rise; and then, owing to these very habits, liberty has been prevented from running into

excesses. This liberal and conservative element has been wanting to us in France. In our own day, as formerly, absenteeism has effected, even in a political point of view, nearly all the mischief; and this is the reason why these two apparently distinct causes of prosperity—liberty without revolutions, and the country feeling—are really but one.

CHAPTER XI.

MARKETS.

I COME now to the more immediate, the most effective of the causes which have contributed to the advancement of British agriculture; namely, the simultaneous development of the greatest industrial power, and the richest commerce in the world. These are really only part and parcel of those just mentioned, for industry and commerce, like agriculture itself, are the offspring of liberty, order, and peace; and these prime conditions originating for the most part with the rural portion of the nation, the whole may be said to proceed from this common source. But just as the consequences of liberty and peace are to be distinguished in their effects from those belonging to rural life, properly so called, so may those which proceed from industrial and commercial development be considered apart; and the latter are the most active. If it were possible for a nation to be largely engaged in manufactures and commerce without possessing either security or liberty, this of itself would be sufficient to cause great agricultural prosperity; and if it were possible for a nation to possess liberty and peace without becoming, from that sole fact alone, large manufacturers and traders, liberty and peace would not be sufficient, even with the aid of rural habits, to produce an equal amount of prosperity.

Some minds, judging more from appearances than

reality, have looked upon commerce and manufactures as enemies and rivals to agriculture. This fatal error is remarkably current in France ; it cannot be too much combated, as nothing is more hurtful to agricultural interests. In reality, the distinction between agriculture and manufactures is false : to bring the land into cultivation is also a manufacture, and the transport, the sale, and the purchase of agricultural produce is also a trade. Only this kind of manufacture and commerce, being altogether of prime necessity, can dispense a little more with skill and capital than the others ; but then they remain in a state of infancy; and when these two powerful aids are supplied, they become a hundred times more fruitful. Even admitting the distinction which usage puts between the terms, there can be no profitable agriculture without profitable manufactures. This is in some measure a mathematical axiom, for commerce and manufactures can alone abundantly provide agriculture with the two most powerful agents of production which exist—namely, markets and capital.

From the reign of Queen Anne, England visibly takes the lead of France in manufactures and commerce—that is to say, in everything ; for this advance supposes and includes all others. After the American War, when the nation, afflicted at the loss of its principal colony, sought compensation for the loss by falling back on its own resources, the start it took was unrivalled ; it was then that Adam Smith appeared, and immortalised himself in a work which showed the causes of the wealth and greatness of nations. Then appeared the great inventors, Arkwright and Watt, who seem, as it were, the instruments for practically carrying out Adam Smith's theories ; then William Pitt arose, to bring the same spirit into the administration of public affairs ; finally, Arthur Young

and Bakewell made their appearance, only to apply the new ideas to agriculture.

The system of Arthur Young is very simple; it is comprehended in one word, the meaning of which was fixed by Adam Smith—*Markets.* Up to that time the English farmers had, like all those of the Continent, worked with little view to a market. Most agricultural productions were consumed on the spot by the producers themselves, and although in England more was sold for consumption beyond the farm than anywhere else, it was not export which regulated production. Arthur Young was the first who made the English agriculturists understand the increasing importance of a market; that is to say, the sale of agricultural produce to a population not contributing to produce it. This non-agricultural population, which up to that time was inconsiderable, began to develop, and since then its increase has been immense, owing to the expansion of manufactures and commerce.

Everybody knows what enormous progress the employment of steam, as a motive power, has effected in British manufactures and commerce during the last fifty years. The principal seat of this amazing activity is in the north-west of England, the county of Lancaster, and its neighbour, the West Riding of Yorkshire. There Manchester works cotton, Leeds wool, Sheffield iron, and the port of Liverpool, with its constant current of exports and imports, feeds an indefatigable production; there an incessant excavation goes on of that subterranean world, appropriately called by the English their Black Indies—an immense reservoir of coal which covers several counties with its ramifications, and throws up in all directions its inexhaustible treasures. The quantity of coal annually raised is estimated at forty millions of tons; this, at 10s. per ton, is equal to twenty millions ster-

ling, which indicates a gigantic manufacturing production, since coal is the material of first importance in all manufactures.

Under this impulse, the population of Great Britain, from ten millions in 1801, has risen to twenty in 1851; that of Lancashire and the West Riding has tripled; there is perhaps no other place in the world where the population is more dense. France can show nothing like it: its total population during the same period has increased not more than a fourth; from twenty-seven millions she has reached thirty-six, and her most populous departments, those of the Rhone and the Nord, after the Seine, which forms an exception, as well as London, count only two of a population to the hectare.

The more populous the country, the less proportion does the agricultural population bear to the whole mass of the people. Towards the end of the last century, the return of the number of agriculturists in England, as compared to the total population, might be about the same as it is at present with us—that is to say, about sixty per cent.

Since then, as population increased, this proportion has become reduced; not that the rural population has decreased, for it has, on the contrary, slightly increased, but because the manufacturing population has increased in a far greater ratio. In 1800, it was reckoned that there were about nine hundred thousand agricultural families in Great Britain; now there may probably be a million. In 1811, the number of non-agricultural families had already reached one million six hundred thousand; in 1821, two millions; in 1841, two and a half millions; now it may be put down at five millions. In general, the rural population amounts to a fourth of the whole; but in particular parts it is much less. In Middlesex

there are two cultivators of the land for every hundred of the population; in Lancashire, six; in the West Riding, ten; in Warwick and Staffordshire, fourteen.

In no part of France, not even in the department of the Seine, do we find such a disproportion. For an urban population, what is Paris with its million of souls, compared to the gigantic metropolis of the British empire, which reckons not less than two and a half millions of inhabitants? What is Lyons, even with its appendage St Etienne, compared to that mass of manufacturing towns grouped around Liverpool and Manchester, and which form in the aggregate a population of three millions of souls? One-third of the English nation is congregated on these two points—London in the south, and the manufacturing towns of Lancashire and the West Riding in the north.

These human ant-hills are as rich as they are numerous. Many workmen in England receive from 4s. to 8s. a-day; the average wage may be reckoned at 2s. 6d. What becomes of the immense amount of wages paid to this mass of workmen every year? It goes, in the first place, to pay for bread, meat, beer, milk, butter, cheese, which are directly supplied by agriculture, and woollen and linen clothing, which it indirectly furnishes. There exists, consequently, a constant demand for productions which agriculture can hardly satisfy, and which is for her, in some measure, an unlimited source of profit. The power of these outlets is felt over the whole country; if the farmer has not a manufacturing town beside him to take off his produce, he has a port; and should he be distant from both, he brings himself into connection with them by canal, or by one or more lines of railway.

These improved modes of transit not only serve to carry off, rapidly and at a moderate expense, what the

farmer has to sell, but they bring him in the same way what he requires — among other things, manures and improvers, such as guano, bones, rags, lime, gypsum, soot, oil-cake, &c., all heavy and bulky articles, which could not easily be conveyed otherwise, and the abundance of which supposes a very active industrial development. Among these are also iron and coal, which are every day more and more used in agriculture, and which, to a certain extent, represent industry itself. Something more productive still than coal, iron, and animal and mineral substances, namely, the spirit of speculation, travels along with them from the manufacturing centres, where it rises, to the fields, where it finds fresh elements to work upon, and brings with it capital: a fruitful interchange, which enriches manufactures by agriculture, and agriculture by manufactures.

Notwithstanding the great facility of transport by steamers and railroads, a sensible difference exists in the gross and net agricultural produce between counties which are exclusively agricultural and those which are at the same time manufacturing.

The manufacturing districts *par excellence*, commencing with Warwickshire in the south, and ending with the West Riding of Yorkshire, are those in which rents, profits, and agricultural wages rise highest. There the average rent is 30s. per acre, and a country labourer's wages 12s. a-week; whilst in the district exclusively agricultural lying to the south of London, the average rent is not more than 20s. per acre, and wages 8s. a-week. The intermediate counties approach more or less to these two extremes, according as they are more or less manufacturing, and everywhere the rate of land and wages is a sure criterion of the development of local industry.

It is pretty generally believed that pauperism prevails

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more in the manufacturing than in other districts. This is quite a mistake. It is shown, from a table published by Mr Caird in his excellent letters upon English agriculture, that in the West Riding, Lancashire, Cheshire, Stafford, and Warwick, the poor's-rate is about 1s. in the pound, to 3s. or 4s. a-head, and the number of poor three to four per cent of the population; whilst in the agricultural counties of Norfolk, Suffolk, Bucks, Bedford, Berks, Sussex, Hants, Wilts, Dorset, &c., it exceeds 2s. in the pound, or 10s. a-head, and the number of paupers is thirteen, fourteen, fifteen, and even sixteen per cent of the population. The cause of this difference is easily understood; the number of paupers and the cost of their maintenance increases as the rate of wages becomes lower. Although the working population be three or four times more dense in the manufacturing than in other parts of the country, its condition there is better, because it produces more.

What has hitherto appeared to us as a series of problems, is now, if I mistake not, found to be perfectly explained.

In the first place, as to the organisation of farming. What characterises English rural economy, is, we know, not so much large farming properly so called, as the raising of farming into a business of itself, and the amount of capital at the disposal of professional farmers. These two features are both due to the immense opening found in the non-agricultural population.

If we transport ourselves to France, to the most backward departments of the centre and south, where the *métayer* system predominates, what do we there find? A thinly-scattered population, at the most not exceeding on an average one-third that of the English—one head only, in place of three, to five acres—and that population

almost entirely agricultural; few or no large towns, little or no manufactures, trade confined to the limited wants of the inhabitants; the centres of consumption distant, means of communication costly and difficult, and expenses of transport equal to the entire value of the produce. The cultivator has little or nothing to dispose of. Why does he work? To feed himself and his master with the produce of his labour. The master divides the produce with him, and consumes his portion: if it is wheat and wine, master and *métayer* eat wheat and drink wine; if it is rye, buckwheat, potatoes, these they consume together. Wool and flax are shared in like manner, and serve to make the coarse stuffs with which both clothe themselves: should there happen to remain over a few lean sheep, some ill-fed pigs, or some calves, reared with difficulty by overworked cows, whose milk is disputed with their offspring, these are sold to pay taxes.

Great fault has been found with this system; however, it is the only one possible where markets are wanting. In such a country agriculture can be neither a profession, a speculation, nor an industry. To speculate there must be the means of selling, and that is impossible where there is no one to buy. When I say no one, it is to strengthen the hypothesis, for such an extreme case is rarely met with. There are always in France, even in the most retired districts, some buyers, though limited in number. It is sometimes a tenth, sometimes a fifth, sometimes a fourth of the population who earn a livelihood otherwise than by agriculture; and as the number of consumers increases, the condition of the cultivator improves, unless he himself pays the incomes of these consumers under the form of judicial expenses or usurious interest for money, which some of them at least

do ; but a tenth, fifth, or even the fourth of a population is not enough to furnish a sufficient market, especially if this population is not itself a producing one—that is to say, engaged in trade or manufactures.

In this state of things, as there is no interchange, the cultivator is obliged to produce those articles which are most necessary for life—that is to say, cereals : if the soil yields little, so much the worse for him ; but he has no choice—he must produce corn or die of hunger. Now on bad land there is no more expensive cultivation than this ; even on good, if care is not taken, it soon becomes burthensome ; but under these conditions of farming no one thinks of taking account of the expense. The labour is not for profit, but for life : cost what it may, corn must be had, or at all events rye. As long as the population is scanty, the evil is not overwhelming, because there is no want of land : long fallows enable the land to produce something ; but as soon as the population begins to increase, the soil ceases to be sufficient for the purpose ; and a time soon arrives when the population suffers severely for want of food.

Let us now take the most populous and most industrious part of France—the north-west ; still we do not find there a population quite analogous to that of the English,—two head only per five acres, in place of three. It is double, however, that which we have anywhere else, and one-half of this population give their attention to commerce, manufactures, and the liberal professions. The country, properly speaking, is not more thickly populated than the centre and south of France ; but we there find, in addition, numerous wealthy manufacturing towns—and among them is the largest and most opulent of all, Paris. A large trade is there carried on in agricultural commodities : corn, wine, cattle, wool, fowls, eggs, milk, &c.,

are directed from all parts to the towns, where they are paid for by manufactured goods. Consequently the lease becomes possible, and in fact introduces itself. This is the true cause of the lease; its existence is a sure indication of an economical condition, where the sale of commodities is the rule, and where, consequently, farming may become a specific branch of industry.

This industry begins as soon as a regular market for it is opened—that is to say, as soon as the industrial and commercial populations exceed a certain proportion, whether it be immediately on the spot, or at a sufficiently moderate distance, with easy means of communication, so that the expenses of transit do not absorb the profits: it becomes more and more flourishing as the market becomes greater and more approachable—that is, the nearer its vicinity to large towns or great centres of manufacture. In that case the market suffices to create profits which rapidly increase capital, farming becomes more and more prosperous, and progresses towards its maximum. This is the case in the departments nearest to Paris. About one-half of France is more or less in this position, the other half possesses only uncertain markets: nothing is easier than to distinguish the two at a glance,—in the one the lease prevails, in the other the *métayer* system.

In England, the half without markets has long ceased to exist; in all parts the rural population finds itself near another community; everywhere the outlet for its produce is as large as in the best parts of France, and in some places much greater. This makes the difference between the two agricultures. Take those parts of both France and England where the outlet is equal, and of as long standing, because time must be reckoned in the comparison, and you will most certainly find a similar agricultural development, whatever be the conditions

otherwise of property and farming. Every other consideration depends upon this.

As soon as the producer finds a large sale for his commodities, his attention is naturally directed to questions to which hitherto he had not paid any attention; for instance, what produce brings the highest price relatively to its cost of production? By what means is the cost of production to be reduced, in order to increase the net profit? In this consists the whole agricultural revolution. The first consequence is the abandonment of those crops which, in a given situation, are not profitable, throwing the attention of the producer upon those which pay best; the second is the discovery of methods for economising labour, thereby rendering it more productive.

Why does the English farmer, for example, give a preference to the production of meat? It is not only because the animals maintain, by means of their manure, the fertility of the land, but also because meat is an article very much in demand, and which sells with the greatest facility throughout England. If our French producers could all at once furnish as much meat, the price would fall below the expenses of production, because the demand is not great enough. Our population at present is not rich enough to pay for meat; we must wait until manufactures and commerce have made sufficient progress to furnish the means of exchange. In proportion as we make progress in these the demand will increase, and our producers will then set themselves to supply it; it would be madness to expect them to do it sooner. Without Arkwright and Watt, Bakewell would have been impossible; the latter appeared just at the moment when the impetus given to industrial production rapidly increased the demand for meat. We do not require to go so far as England to see that the production of this food

becomes abundant as soon as there is a sufficient market for it. The parts of the country where it is most largely produced with us are those where it is dearest—that is to say, most in demand; it is cheapest in the south, and the south hardly produces any. In 1770 meat sold in England at 3d. per lb.; the price now, after all that has been done to increase the production of every kind of cattle, is 6d., or just double. These figures speak volumes.

With respect to milk, is it surprising that milch cows should be so numerous, when milk sells currently in most parts of England at 2d. or 3d. per quart? The working classes in England consume a great deal of milk. Near manufacturing towns, the average produce of a milch cow is valued at £20, and it is not uncommon for some to yield as much as £40. Butter, which in 1770 sold for 6d. per lb., now sells for 1s.,—it also has doubled. Put our farmers in a similar position, and see if they will not have as good and as well-kept cows. Look what the proximity of Paris has done for the producers of Gournay and Isigny.

The cultivation of wheat in place of rye is another consequence of the same principle. In the districts of France furthest from markets, the suppression of the rye crop is quite impossible; for, in the first place, the *métayer* must have food. He must be near a market to do otherwise than grow rye, even should the land be unsuitable for cereals and most favourable for other crops, because there must be the opportunity for selling the new produce in order to buy corn. The substitution of wheat for rye presents the same difficulties, for it requires disbursements for lime and other expenses; and why make the change, if wheat is in little demand, or not wanted at all? Wherever the demand for wheat is on the increase—that is, where there is a population which

will pay dear enough for its bread—the transition takes place even in France. It has already taken place everywhere in England, because the working classes earn sufficient to pay for white bread.

The employment of horses in place of cattle, the use of machinery to economise manual labour, are all owing to this. The grand economical principle of division of labour is practised under every form. The farmer with no market for his produce seeks, above all, to curtail his expenses, because he lacks the means of replenishing his purse; the farmer who is sure of a good market does not shrink from useful expenditure.

The owner of property in this respect is no better off than the farmer. Where small property is found to be unremunerative, the absence of a market is chiefly the cause. A man with a small capital has no inducement to become farmer, when the chance of profit is small and uncertain. His object also is to live so that the least possible demand may be made upon his purse; and what better method of securing his subsistence, when opportunities of interchange are wanting, than to invest his little all in a piece of land and to work it himself? It was so in England before the great markets were opened. The yeoman did not find it profitable to turn farmer until the great industrial movement took place. Arthur Young was the theorist, not the actual promoter of this revolution: it was Watt and Arkwright who effected it.

The same causes which enhance profits raise rents. We have, to a certain extent, seen this to be the case, when, in the reign of Louis XVI., trade in agricultural produce became free. We have seen rents rise gradually from 3 francs per hectare to 30 francs, according as industrial and commercial wealth progressed. We see it at

this day reach 100 francs and upwards, in the departments where a non-agricultural population abounds, and fall to 10 in those where it is wanting. If we had everywhere the same outlets as in England, no doubt our average rent would very soon be equal to that of our neighbour; that is to say, double what it is now. Only double the rent, and, even without changing the actual condition of property, many of our poor proprietors would become, by this means alone, rich proprietors. We should immediately have the exact equivalent of the English gentry.

There are, moreover, two kinds of property: the fixed, called in England real property, and the movable or personal property. The income from real property for the three kingdoms is estimated at £120,000,000 sterling, or three milliards of francs. Land, properly so called, figures for only half of this: the rest is from house property, mines, quarries, canals, railways, fisheries, &c. The value of house property alone is nearly as much as the land itself. In Great Britain, the income from land is £46,000,000 sterling, while that of houses is £40,000,000. The income from personal property may, at the same time, be valued at £80,000,000 sterling, or two milliards of francs, deducting interest paid to mortgagees, already included as income from properties mortgaged. It follows, therefore, that the rent of land, so high relatively, does not amount to a third of the income of English proprietors.

We see now how they come to be, on an average, richer than ours. In the first place, they are proportionately much less numerous; and then, again, (and this is the main reason), they have a much larger revenue to be divided among them. With us the income from land, which, to begin with, is proportionately less than the

whole rents of land in England, is not very much less than the half of the income from all capital, both fixed and personal together. Small as the distribution of other wealth is in other hands, very little of it is found in the hands of our landed proprietors. In England, on the contrary, there are few landed proprietors who, in addition to the income from their land, have not an equally large, and oftentimes larger income, from houses, railway shares, government stocks, &c. Many of them are proprietors of coal-pits which have yielded them, and every day bring them in, immense sums. Others have property upon which are constructed manufactories, dwelling-houses, canals, or railways, and from which they have profited by a rise in value.

It is well known that the Marquess of Westminster, the Duke of Bedford, and others, own a great part of the land upon which London stands, and which is let upon long leases. And it is the same with almost all the English towns. Since the year 1800, 1,500,000 new houses have been built in England alone, 6000 miles of railway have been opened, and an enormous number of coal-pits and mines have been set to work. Here are millions annually, the greater part of which goes into the pockets of the landed proprietors; and it is not the great proprietors only who partake in this good fortune, the middling and smaller ones have also their share.

Lastly, there is another means which causes a large portion of the capital created by manufactures to flow towards landed property—and that is, the acquisition of estates by wealthy traders. These acquisitions, more numerous than we in France suppose, add greatly to the average wealth of property, and contribute to make its possessors more liberal towards the soil. The new proprietors bring into the administration of their country

estates an amount of resources and speculative boldness, which to the same extent is rarely found among the others ; as witness one example among a thousand. Mr Marshall, the son of a rich Leeds manufacturer, purchased, some years ago, 1000 acres of land, at Patrington, near the mouth of the Humber, in the East Riding of Yorkshire. The enormous expense to which he went in rebuilding offices, erecting steam-engines, draining, liming, &c., is well known throughout England.

Such things take place in France every day, but, no doubt, of a less striking character, because industrial pursuits are less productive, though the features and circumstances are the same. What fortunes have been made during the last fifty years on the lands about Paris, and other towns of France! What large indemnities have already been paid for railways, canals, mines, manufactories! What doubling of rents, caused by the opening of new means of communication, or the development of neighbouring large hives of industry! Finally, what quantities of land every day pass from insolvent and poor hands into wealthy ones! It is the natural progressive movement of society, a movement which is accelerated when not hindered by any political catastrophe.

Reduced to these limits, the agricultural question is nothing more than one of general prosperity. If French society, retarded by all the obstacles which itself originated, could ever have fifty years before it such as those which have elapsed from 1815 and 1848, it would no doubt regain in agriculture, as in everything else, the distance which separates it from its rival. The greatest difficulties are passed. We, as well as the English, make use of those powerful means which nowadays increase the power of labour, and which, applied to almost a new

field, are capable of advancing to an infinite extent the progress of wealth. Nowhere are railways capable of producing a more thorough and profitable revolution than with us. In England these wonderful roads connect only parts already connected by other means of communication, and whose productions are similar in character. With us their effect will be to unite regions, all differing in climate and productions, which have as yet only imperfect communication one with the other. It is impossible to predict what may result from such a radical change.

It is of consequence, then, that our proprietors and cultivators apprehend clearly the only means of enriching themselves, lest they hinder their own prosperity. Their opposition would not arrest the course of things, but would render it slow and tedious. All jealousy between agricultural and industrial and commercial interests, will only damage both. If you wish to encourage agriculture, develop manufactures and commerce, which multiply consumers; improve especially the means of communication, which bring consumers and producers nearer to each other; the rest will necessarily follow. Commerce and manufactures bear the same relation to agriculture as the cultivation of forage crops and multiplication of animals do to cereal production. At first they seem opposed to each other, but fundamentally there is such a strong connecting link between them that the one cannot make any considerable progress without the other.

Markets—this is the greatest and most pressing requirement of our agriculture. The proceedings to be adopted in order to augment production do not come till afterwards. I have pointed out the principal methods

followed in England, and will shortly point out others. Our agriculture may there find useful examples; but I am far from giving them as models for imitation. Everywhere each soil and climate has its requirements and resources. The south of France, for example, has scarcely anything to borrow from English methods; its agricultural future is nevertheless magnificent. There is only one law which admits of no exception, and which everywhere produces the same results—that is, the law of markets.

CHAPTER XII.

THE CUSTOMS REFORM.

We have now reviewed the principal causes of the origin of English agricultural wealth. Its principle lies in the predilection of the rich for a country life. Besides the direct advantages arising from this to the land itself, these inclinations have produced political liberty, and preserved it from the impure contact of revolutions. Liberty without revolutions has produced an immense industrial and commercial development, and these again have produced great agricultural prosperity : the fruitful impulse reverts to its starting-point. It remains now to give an account of a recent event, which appears contrary to these premises, but which nevertheless is only a consequence of it : I mean the customs reform of Sir Robert Peel, and the crisis which followed it.

In the midst of its grandeur and wealth, England is constantly exposed to a great peril—the consequence even of its wealth—and that is excess of population. It is now half a century since Malthus, one of its illustrious sons, raised the cry of alarm for the future. Since then, the country has had several sad warnings in the riotings caused by scarcity. However rapid may be the development of agriculture, it has difficulty in keeping up with the still more rapid advance of population. A rise in the price of food is the certain effect of this accu-

mulation of people. We shall now see how useful this rise has been, inasmuch as it has stimulated agriculture; but there is a point where it becomes hurtful, and that is when it reaches a scarcity price. Then the suffering of an important portion of the population reacts upon all the rest, and the whole social machine works distressingly.

Under the state of production which we have pointed out, and with a population of twenty-eight millions, the equal distribution of food obtained from agriculture in the three kingdoms gives the following results :—

Meat, 60 kilogrammes per head,	130 lb.
Wheat, 1½ hectolitres,	4⅛ bushels.
Barley and oats, 1 hectolitre,	2¾ „
Milk, 72 litres,	16 gallons.
Potatoes, 7 hectolitres,	16 bushels.
Beer, 1 hectolitre,	22 gallons.

Total value, 130 francs, according to English prices; or 105 with the reduction of twenty per cent.

In France, a similar distribution gives :—

Meat, 28 kilogrammes, Fowls and eggs=6 kilogrammes of meat,	75 lb.
Wheat, 2 hectolitres,	5½ bushels.
Rye and other grain, 1½ hectolitres,	4⅛ „
Milk, 30 litres,	7 gallons.
Potatoes, 3 hectolitres,	8¼ bushels.
Vegetables and fruits, value,	8 francs.
Wine, 1 hectolitre,	22 gallons.
Beer and cider, ½ hectolitre,	11 „

Total value, 105 francs.

The average alimentation, therefore, is as nearly as possible the same in both countries. The British Isles have the advantage in meat, milk, and potatoes; which France makes up for in cereals, vegetables, fruits, and quantity as well as quality of beverage. In point of requirements, the situation of both populations should make it the same; but, from some cause or other, the English consume more than the French. England proper takes to

herself almost all the meat, and nearly all the wheat, of the two islands, leaving to the great majority of the Scotch and Irish population only barley, oats, and potatoes; and yet, in spite of the greatly superior production of the English lands, and notwithstanding the large importation of cattle and corn from Scotland and Ireland, the demand for alimentary substances in England is such, that prices there are generally a good deal above what they are in France; and they would have been higher, had not foreign importations kept them down.

Under these circumstances, the question of a supply of provisions has always been one of primary importance with English statesmen. In a country where population is so condensed that about a third of the people are reduced to the strict necessaries of life, and the other two-thirds, although the best off of any in the world, still do not consider that they have enough, the least deficiency in the harvest is apt to cause serious embarrassment. This has at different times happened, especially during the height of the war with France. Corn then rose to extreme prices — £4, £5, and up to £6 per quarter. Since 1815, the progress in farming and importation has gradually brought the price of wheat back to something under 60s. the quarter, and in 1835 it even fell to 40s.; but since 1837 the tendency has been to rise, and it has already several times passed the rate of 70s. per quarter.

It was at this price when the blight took place, which threatened the existence of one of the chief articles of the national food; I mean the potato disease. This blight, which produced a grievous famine in Ireland, had even in England disastrous effects; and it was shortly followed by serious apprehensions for the corn crops,—fears which were too truly realised in the bad years of 1845 and 1846.

Other reasons called the attention of provident minds to the price of food. The whole framework of British wealth and power rests upon the exportation of its manufactures. Until lately, English industry had few rivals, but other nations have gradually been making progress in manufactures, and English productions are not the only ones which now appear in the European and American markets. English merchants cannot, then, sustain a universal competition, except by cheapness ; and this cheapness is not possible, excepting when wages are moderate. Now, the English workmen, although the best paid in the world, are not, or at least were not, in 1848, satisfied with their wages. The storm which raged on the Continent in 1848–9 began to be felt in England, and was exhibited in expressions of discontent.

This, then, was the manner in which the problem to be solved presented itself; a terrible problem, carrying with it the life and death of a large number of people, and perhaps also the life and death of a great nation. On the one hand, scarcity already devastating one portion of the British territory, and threatening to extend itself over the rest—the price of food consequently threatening to rise to an unlimited height ; on the other, the necessity, notwithstanding the probable rise in the price of food, for keeping wages at such a rate as to allow and facilitate the exportation of manufactured goods ;—and, to complete the difficulty, a strong desire among the labouring classes for an increase of comforts, at the very time perhaps when food was to fail them, and when death from famine had begun in Ireland. It was then that the eminent individual intrusted with the helm during that difficult period, at once decided upon the bold and liberal measure which saved all.

For a long time previously, English legislation upon

grain had in view to keep the price as nearly as possible at 56s. per quarter, by means of an ingenious but complicated system, more efficacious in appearance than in reality—the Sliding Scale. A popular agitation, well known under the name of the League, had been organised to defeat this legislation, and had made considerable progress. Sir Robert Peel, then Prime Minister, felt that the time had now come for adopting a wider and more radical measure. He therefore decided upon doing that which he had himself previously opposed—namely, to abolish entirely the duties levied upon the importation of articles of food; and what is still more to be admired than the resolution itself, is, that in the two Houses, composed mostly of landed proprietors, a majority was found for carrying it into law.

The disturbance occasioned by this reform has been great, no doubt, but nothing in comparison with the calamities which it avoided. The urgency of the case was immediately shown by the immense quantity of grain and flour imported, amounting, during the single year of 1849, to—

13 million	hectolitres	of	wheat,	.	= 4½	million quarters.
6	„	„	Indian corn,		= 2	„
4	„	„	barley,	.	= 1½	„
4	„	„	oats,	.	= 1½	„
3	„	„	wheat flour,		= 1	„

besides butter, cheese, meat, lard, fowls, and as many as four million dozen of eggs. This alone saved England from the scarcity which threatened it, and from which it was found impossible to save Ireland. For the future, supplies are certain, since the English consumer has the whole world from which to supply himself. The price of articles of food fell immediately more than twenty per cent. In this way the necessity for a nominal rise in wages was obviated, and the prosperity of the lower

classes increased one-fifth; and exportation, which is the fortune of England, having remained in a flourishing state, the demand for labour increased, while the number of poor receiving public aid diminished.

One great interest, however, seemed likely to suffer from this crisis—namely, that of farming and landed property. Noisy reclamations were not wanting from that quarter, and doubts were for some time entertained respecting the future of this reform. Now the question is settled, and henceforth the reform is accepted even by those who combated it with the greatest acrimony. Its effects have been seen, and the exaggerations of the first moment have disappeared.

In the first place, people saw that agriculture, properly speaking, had not so much to do with the question as income from property. The high price of food serves more than anything else to cause a rise in rent, and, provided rent falls in proportion to the fall in prices, the farmer, properly speaking, becomes almost a disinterested party. This simple distinction has sufficed to separate the farmer's interest in the question from that of the proprietor. *Lower your rents!* was the cry against property from all quarters, and farming will not suffer. The argument was all the more powerful, because for fifty years past high prices had raised rents, and even after a considerable reduction they would still be above those of 1800. In the impassioned language of the moment, they called this reduction a partial restitution of what had been unduly levied by the proprietors upon the subsistence of the public for the last fifty years.

In the second place, it was argued that that which occasions the prosperity of landed property is industrial and commercial wealth. Now, if the price of food rises, or if it be only maintained at the established price—that

is to say, much higher than anywhere else—wages must rise in order to satisfy the new wants of the working population. English manufactures will no longer be able to sustain a foreign competition; exports will fall off; and the distress of manufactures and commerce will react upon agriculture, which will no longer be able to sell its productions. A fall will then become inevitable; but it will be a terrible fall, produced by poverty. Popular outbreaks of the worst kind will again take place, and no resistance can oppose a starving population. Better give in beforehand, when times are quiet, when a judicious concession may not only prevent interference with manufacturing production, but will add to its activity. Increase of population and wealth will soon return to agriculture more than it has lost, by increasing at once the number and the means of consumers.

To these arguments supported by facts, the conviction gradually arose that the evil was not altogether universal and irremediable; that a good number of proprietors and farmers had been only slightly injured; and that the rest had means of making up the loss in price by increased production. From that moment the cause of reform was secured, for the English nation is instinctively a nation of economists,—they all very well understand the advantages of cheapness when it is possible. There have been, and no doubt will still be, many individual cases of suffering; but, upon the whole, as is now admitted, this check, which appeared likely to be so fatal to English farming, will, on the contrary, open out for it a new path; and, in addition to the immense advantage of dissipating all fear concerning the national supply of food, and the no less great advantage of removing all cause of inferiority for English manufactures in the markets of the world, there must be added that of

a notable increase in agricultural production. What a rise in price did formerly, a fall will have effected at the present day. This apparent contradiction is not one in reality, for they will have had both a similar beginning—wealth.

England may be divided into two nearly equal bands by a line running from north to south. The western division being very much more wet and rainy than the eastern, the cultivation of grasses there predominates; in the eastern half, on the contrary, it is the cereals. The fall having been less, and not so general upon animal as upon cereal productions, the crisis has been less felt in the western than in the other division; and it may be said that in many quarters it has not been felt at all. The eastern half, in its turn, divides itself into two distinct regions; the one to the north, where light soils predominate, and where the Norfolk rotation reigns; the other in the south, where argillaceous or calcareous-clay lands prevail, and where the cultivation of roots has made less progress. In the first, cereals not being yet the chief production, the crisis, though real, has been endurable; in the second, where cereals hold the first rank, it has been severe.

Many proprietors of the west and north have been able to preserve their rents intact, others have managed to limit their reductions to ten and fifteen per cent. In the south-east, and in the clay districts in general—that is to say, over about a fourth of England—the reduction, to be efficacious, required twenty to twenty-five per cent, and in some places farmers have entirely abandoned their farms. These descriptions of land were already the most indifferently cultivated, the least productive of the British soil, and those which gave over an equal surface the lowest rents, the lowest wages, and lowest profits.

Under such a trial, the industrious spirit of our neighbours was set to work. The causes which, since the introduction of the Norfolk rotation, had occasioned a relative inferiority in clay lands, once looked upon as the most fertile, were carefully studied, and new systems have arisen to effect a remedy. Besides the proprietors and farmers interested, a new class of men took up the question. These were the partisans of free trade. They undertook to prove that, even under the worst circumstances, the agriculture of the country could survive and prosper. Commercial men purchased land for the express purpose, in the most severely tried districts, in order to make all sorts of experiments. The first results were not satisfactory; but by degrees the new principles developed themselves, and it may now be affirmed that clay lands are destined to resume their ancient position. The English rarely fail in what they undertake, because they carry along with them a perseverance which nothing discourages.

In addition, the means adopted for transforming the strong lands, seemed applicable, to a certain extent, to the others; and the improvements which necessity forced upon some points, tend more or less to become generalised. The entire soil will thus profit from the remedy, without having equally suffered from the evil.

Meantime the working classes have derived all the profit they looked for in the lowering of prices, and are content with it. What is no less worthy of admiration in England than the spirit of concession in the one class, is the expression of patience in the other. At one time it was thought that wages would fall. Public opinion protected them, and they have been maintained. The labouring classes have profited, therefore, by the whole fall in the price of necessaries. It was also thought that the

demand for manual labour would fall off.* Everything, indeed, betokens that in certain quarters it will be reduced, but in others it will be increased. Upon the whole, it will remain at least equal to what it was before.

Public opinion demands other improvements in favour of the poorer classes. It is desired that the laws respecting settlement in the matter of poor-rates should be revised, in order that labourers may easily remove from those places where wages are low, to where they are higher, without forfeiting their claim to public relief. It is also required that the proprietors should take a parental charge of their labourers, and watch over their education and morality, as well as their personal comforts ; and the highest noblemen consider it an honour to fulfil this duty. Many of them build healthy and commodious cottages, which they let at reasonable rents. Prince Albert, who desires to be the first always in setting a good example, exhibited in his own name at the Great Exhibition a model of such buildings. A small garden is generally attached, where the tenant may grow fresh vegetables. These are what are called allotments. On all large estates the proprietor builds churches and schools, and gives encouragement to associations which have for their object the good of the community.

Thus the great war of classes has been prevented ; and, without other shocks than those which were absolutely unavoidable, England has made a great step, even in an agricultural point of view. This is the reason why England went into mourning when Sir Robert Peel died ; the great citizen had been understood.

* Since the above was written, circumstances have changed. After having remained low for several years, prices have begun again to rise, and now (January 1854) they are higher than they were previous to the reform ; but this rise, being partly the effect of the bad harvest of 1853, and having nothing artificial about it, is not attended with the same inconvenient effects.

I shall not stop to point out the difference between the English crisis of 1848 and the French one of the same period. The rural interest is that which suffered most with us also; but it did not suffer alone—all were shaken at once. We witnessed a sudden fall in food—not, as in England, because it was too high, but because, industrial and commercial occupations being at a stand-still, the non-agricultural classes had not the wherewithal to buy food. Consumption, in all branches, in place of increasing, as with our neighbours, was reduced to bare necessaries; and in a country where the ordinary quantity of meat and corn was scarcely sufficient, both were found to exceed the resources of an impoverished population. Farming and property, dismayed, found no support from capital as in England, since much of it had been swept away, and the remainder in alarm was sent out of the country or secreted. Happily, by peculiar favour of Providence, the fruits of the earth were abundant during that trial; for if the least doubt had arisen as to supplies, in the midst of general disorder, we should have seen the horrors of famine associated, as formerly, with the horrors of civil war.

Returning confidence begins to repair in part these disasters. France once again shows, what she has so often shown, especially after the anarchy of '93 and the two invasions, that she cannot do herself an irreparable injury. The more resources she exhibits, in spite of the immense losses she has sustained, the more one is struck with the progress she ought to have realised in the last five years, had she not violently put a stop to her own progress. The receipts from indirect taxation, which is one of the most certain signs of public prosperity, were eight hundred and twenty-five million francs in 1847, and have recovered slowly, after an enormous falling off, to

eight hundred and ten millions in 1852. These would have reached, in the present year, nine hundred and fifty millions, or one milliard, if the impetus which they had received previous to 1848 had been sustained; and all branches of public wealth would have responded to this brilliant sign of prosperity.

Finally, if I have found it necessary to relate what has taken place in England since 1847, it must not be concluded that a similar revolution appears to me desirable, or even possible, in France. We are in all respects differently circumstanced. To establish cheapness of food cannot be a question with us, for that we already have; since England, after all her efforts, has not been able to come below our highest current rates; and over half the country our prices are only too low. The rich and fully populated parts of the country must not be confounded with those which are not so. The requirements of the one are not at all those of the other. We do not resemble the England of 1846, but the England of 1800. With us it is not production which fails consumption, but, in the half of France at least, it is consumption which falls short of production. Instead of seeing everywhere corn at 56s. per quarter, and meat at 6d. per lb., we have whole districts where the producer scarcely obtains half of these prices for his commodities. It is not a fall, but a rise that they there require. The time is still distant when they will suffer from the excess of demand for their agricultural produce, and from high prices.

But neither must it be imagined that the sliding-scale for corn, and exorbitant duties upon foreign cattle, could do any good to France. In fact, these duties have hitherto had no effect in raising prices: they have rather contributed to lower them by arresting the expansion of

commerce. French agriculture, which considered itself protected, was not, and could not, be so : its own prices gave it only too much protection from foreign competition. It is not, then, upon custom-house regulations, but upon the increase of foreign consumption, through the improvement of communication and reciprocity, and in some respects upon exportation, that it should rely for a better market for its products. Every other plan is chimerical, and, what is more, hurtful to its interests. The same freedom of trade which tends to lower prices of food in England, because they are too high, would have rather the contrary effect in France, because they are habitually too low with us, at least in a great many quarters.

CHAPTER XIII.

HIGH FARMING.

Among the innovations in agriculture which the last crisis produced, by far the most important—that which will remain as the most useful effect of that great disturbance—is the process of putting the land into good condition, known by the name of drainage. The draining away of superabundant water, especially upon stiff soils, has always been the chief difficulty in English agriculture. Hitherto the means employed for getting rid of it were imperfect. Now, however, the problem is completely solved. "Take this flower-pot," said the President of a meeting in France lately; "what is the meaning of this small hole at the bottom?—to renew the water. And why to renew the water?—because it gives life or death: life, when it is made only to pass through the bed of earth, for it leaves with the soil its productive principles, and renders soluble the nutritive properties destined to nourish the plant; death, on the other hand, when it remains in the pot, for it soon becomes putrid, and rots the roots, and also prevents new water from penetrating." The theory of drainage is exactly described in this figure.

The new invention consists in employing cylindrical tiles of burnt clay to carry off the water, instead of open ditches, or trenches filled with stones or faggots,—methods known even to the ancients. These tiles are several

decimetres* long, and placed end to end at the bottom of trenches, which are then filled in with earth. It is difficult at first to understand, without having seen the effect of these tiles, how the water can get into them and so escape ; but as soon as one sees a drained field, not the smallest doubt of the fact can remain. The tiles perform the office of the small hole always open at the bottom of the flower-pot. They attract the water, which comes to them from all parts, and carry it out either into drain-pits, or main-drains, where the inclination of the land admits of it. These tiles are often made by machinery, which renders their manufacture inexpensive. They are made of various dimensions, and laid in the trenches at a greater or less depth, and more or less apart, according to the nature of the soil, and the quantity of water to be drained off. The total cost for purchase and laying amounts to about £4 an acre. It is now generally considered that this outlay is money invested at 10 per cent, and the farmers scarcely ever refuse to add to their lease 5 per cent per annum upon the proprietors' outlay for draining.

There is something magical in the effect of draining. Both meadow and arable lands are equally benefited by it. In the meadows, marsh plants disappear; the hay produced is at once more abundant and of better quality.† On the arable lands, even the most clayey, corn and roots shoot more vigorously, and are healthier, and less seed is required for a larger crop. The climate itself gains sensibly by it. The health of the inhabitants is improved; and in

* The decimetre equal to nearly four inches.

† Experience has shown, for some time past, the danger of draining grass-land in the drier parts of England. I mention this exceptional fact here, in order to put upon their guard those who are seeking to introduce drainage into France. One cannot be too cautious where an agricultural innovation is concerned.

all parts where drainage has been vigorously carried out, the mists of the foggy isle seem less thick and heavy. Drainage was thought of for the first time ten years ago, and a million of hectares at least are already drained; everything promises that, in ten years hence, almost the whole of England will be so. It is as if the island were once more rising out of the sea.

The second improvement, of a general kind, which will date from the last few years, is a large increase in the employment of machines, and particularly of steam. Previously to 1848, very few farms possessed a steam-engine. Now, one may safely say that, in ten years hence, the exceptions will be those without them. Smoking chimneys are to be seen in all parts of the country. These steam-engines are used for thrashing corn, cutting fodder and roots, grinding cereals and oilcake. They are also employed to raise and distribute water, to churn butter, &c. Their heat is no less available than their power, and serves to prepare food both for men and cattle. Some movable steam-engines go from farm to farm like a labourer, to do heavy work. Small portable railways have been invented for conveying manure to the fields, and carrying back the crops. Machines for mowing and tedding hay, reaping, and digging, are now under trial. Some have even undertaken to plough by steam, and do not despair of success. The great desire at present is to find means for turning up the soil to a depth hitherto unheard of, in order to give greater vigour to the arable bed. Everywhere mechanical genius is making exertions to carry into agriculture the wonders it has elsewhere realised.

These new processes are only new applications of old principles; but there is one which is at variance with all habits, and which encounters more opposition. I have

already remarked how much the pasturage of cattle was held in repute by the English farmer. The new school does away with this mode of feeding, and introduces permanent stall-feeding (*stabulation*). But this improved stabulation differs as much from the imperfect system practised upon the Continent, as the cultivated pasture differs from the coarser pastures of our poor districts. Nothing is bolder, more ingenious, more characteristic of the spirit of enterprise among the English than the present system of stabulation, such as has been first practised in clay districts by the inventors, and which tends to extend itself everywhere.

Suppose a cattle-house, thoroughly aired, usually constructed of open planking, with mats of straw, which are raised or lowered at pleasure for the purpose of sheltering the animals, in case of need, from the wind, sun, or rain. The cattle, usually of the short-horned Durham breed, are there shut up loose in boxes, where they remain till ready for the shambles. The flooring under them is pierced with holes, to allow their evacuations to fall into a trench below. Beside them is a stone trough, with abundance of water; and others contain an unlimited quantity of food. This food is sometimes composed of chopped roots, bruised beans, crushed oilcake; sometimes a mixture of chopped hay and straw and bruised barley; the whole more or less boiled in large boilers, heated by the steam-engine, and fermented some hours in closed vats. This extraordinary food, the appearance of which confounds a French agriculturist, fattens the cattle with great rapidity. Milch cows even may be submitted to this seclusion. Examples of this stall-feeding are found even in the counties most renowned for their dairies, those of Cheshire and Gloucestershire. The animals are there fed on green meat, and the strictest attention is paid

to ventilation, and having the sheds thoroughly lighted and clean, warm in winter, and cool in summer, protected from variations in temperature, and from all that might disturb or annoy the cows, which there live in a constant state of ease and quiet very favourable to the secretion of milk.

The manure which accumulates in the trench is not mixed with any kind of litter; it has been thought much more profitable to make the cattle eat the straw. This manure is very rich, owing to the quantity of oily substances contained in the food of the animals, a portion of which is not assimilated by digestion, notwithstanding all the means used for that purpose. This manure is taken out every three months, when required for use. In the mean time, it is neither washed by rain nor dried by the sun, as is too often the case with the manure-heap exposed in the farmyards. A light sprinkling of earth or other absorbent hinders or retards the disengagement of ammonia, and its consequent dissipation in the atmosphere. In entering these sheds, the absence of smell is remarkable. The manure in this way preserves all the fertilising elements which escape elsewhere and poison the air, in place of fertilising the soil. Sometimes it is employed in a solid state for cereals, sometimes diluted with water, and applied in a liquid state to meadow-land.

Pigs, like oxen, are fed indoors, and upon perforated flooring: their food is similar. Sheep alone are still fed out of doors, but they also are immured as much as may be. No bad effect upon the health of one or other has yet been perceived from this strict confinement; provided they enjoy constant pure air in their prison, and have the necessary space to move about—that is to say, a yard square for a sheep or a pig, and two to three

yards square for a bullock—it is said that they thrive excellently. Exercise in the open air, hitherto considered necessary, is now looked upon as a loss, which shows itself by a diminution in weight.

One cannot help feeling sorry to see these poor animals, whose congeners still cover the immense pastures of Great Britain, thus deprived of their liberty, and prevented from moving about, and in thinking that the day may perhaps come when all the English cattle which now enjoy the green pastures will be shut up in melancholy cloisters, which they will leave only for the slaughter-house. These manufactories of meat, milk, and manure, where the living animal is absolutely treated as a machine, have something about them revolting, like a butcher's stall; and after a visit to one of these stalled prisons, where the process of making the staple food of the English is so grossly carried on, one takes a loathing at meat for several days. But the great voice of necessity speaks out. Every energy must be used to feed that population which unceasingly multiplies, and whose wants increase in a greater ratio than their numbers. The cost of producing meat must be lowered as much as possible, in order to obtain a profit with the new scale of prices.

Adieu, then, to the pastoral scenes of which England was so proud, and which poetry and painting vied with each other to celebrate. Two only chances remain to them; and these are, that some new discovery may be made for raising the produce of pasturage to the same height as that which stabulation now gives, or that further experience may show some detriment to the cattle from this confinement. Already complaints are made about the quality of the meat so abundantly produced in this way; it is said that the oilcake gives it a bad taste, and that the excess of fat on the Durham cattle

and Dishley sheep renders the meat neither very agreeable nor so nourishing. It is possible that this is an evil in the new system, and that pasturage, surpassed in quantity, maintains its position for the quality of its produce; it is possible, also, that some new disease may suddenly develop itself among these inert and unnaturally fattened races, and oblige a new infusion of more energetic blood. In any case we may depend upon this, that the old-fashioned pasturing will not be given up without a struggle; if it is destined to disappear, it will be because of there being no other alternative. The most likely result is the adoption of a mixed system, partaking of the advantages of both methods.*

While by means of the improved pasture farmers succeeded in keeping at most one head of large cattle or its equivalent to one hectare in cultivation, which was already much more than could be done in France, it is now maintained that by stabulation they will be able to keep two, and even three, and so increase considerably the production of cereals. In that case, all the land becomes arable; and the Norfolk rotation may be applied over the whole extent of the property, in place of being confined to a half. Such are the changes which take place in things human; agriculture is subject to them like all else. Hitherto it was the use of the pasture-land which, by increasing the number of cattle, and reducing the breadth of cereals, swelled the average return of the corn-land. Now the reduction or abolition of pasturage, while it further increases the number of cattle, supplies fresh means for increasing the fertility of the soil, and consequently the production of corn for human consumption.

* We believe this last conjecture is that most likely to be realised. Box-feeding and soiling is not gaining so rapidly in favour as to cause us any anxiety, either as to the desertion of our pastures, or the comfort and health of our stock.—J. D.

We have already noticed that, in the present state of things, a farm of 175 acres, taken in average condition, would have 75 in grass and natural pasture, 20 in roots and pulse crops, 20 in barley and oats, 40 in artificial grasses, and 20 in wheat. By the new system, pushed to its greatest extent, the natural meadows would disappear, and the 175 acres would be thus divided, 35 in roots or pulse crops, 35 in barley and oats, 70 in artificial grasses, and 35 in wheat. The proportion of improving crops to exhausting, which in the first case was 135 to 30, would in the second be only 105 to 70; but this difference, it is said, would be more than compensated by the additional quantity of manure, since, instead of feeding 70 head of cattle, 150 or their equivalent might be kept, and not an atom of manure would be lost.

Can the extension of roots, pulse crops, and artificial grasses, at the expense of natural pasture, really give, as is affirmed, two or three times more food for cattle? This question is already, in many respects, proved by facts. All these crops are improved together, and, with the aid of draining and machinery, carried to their maximum. The cultivation of turnips in drills, called the Northumberland system, nearly doubles their produce; the *rutabagas*, or swedes, which are substituted for English turnips on clay lands, give a better result; and a still larger increase is obtained from the artificial meadows since two new methods have been introduced for rendering vegetation more active: the first is the use of a particular kind of rye-grass, called Italian rye-grass; the second an improved method for distributing liquid manure.

The Italian rye-grass is a plant remarkable for its rapid growth. It lasts only two years; but under favourable circumstances it may be cut as many as eight times in one

season. The hay it gives is hard, but, consumed in the green state, it is excellent. It thrives even in the coldest districts, notwithstanding its name and origin; and it is fast coming into general use both in England and Scotland. If it realises the expectations formed of it, it would seem to be superior to lucerne.

As to the mode of distributing the liquid manure, it is certainly the most original and curious part of the system. It was invented by Mr Huxtable of Dorsetshire, the principal promoter of the new agricultural revolution. It is as follows: The evacuations of the cattle, after falling into trenches running under the stalls, pass through pipes into a reservoir, where they are mixed with water and fertilising substances; from thence other pipes branch off underground to the extremities of the property. At distances of every fifty or sixty yards are placed vertical pipes rising from the conducting-pipe to the surface of the ground, the orifice of which is closed by a cap. When it is desired to manure a part of the land, the cap is removed from one of the vertical pipes, and a gutta-percha tube fitted on; a pump put in motion by the steam-engine drives the liquid through the pipes, and the man who holds the movable tube waters around him as from a fire-engine. A man and a boy are able to manure in this way five acres a-day.

The expense of the pipes and pumps amounts to about 30s. per acre where earthenware pipes are employed, and £4 where they are made of cast iron. The construction of reservoirs and setting up a steam-engine constitute a separate expense, and ought not to be included in the estimate, since both the one and the other are henceforth indispensable in every well-ordered farm. The laying of the pipes becomes then an economy rather than an expense. The outlay for first cost and keeping up is

very soon regained by the saving in manual labour and time, and the results obtained are splendid. Vegetation very quickly takes up the enriching properties thus divided and distributed in showers. The effect of the application is in some degree immediate ; and it may be constantly exhausted, since it can be constantly renewed.

This ingenious invention is evidently destined to meet with the greatest success. Mr Huxtable began upon sixty acres ; but now there are farms, particularly in Ayrshire, where these pipes extend over five hundred. It has the merit of being adapted to all systems of cultivation, and may be the means even of preventing the doing away with pasturage : it is capable of application in all climates, and may be carried on in hot countries, where it would effect much greater wonders. It appears capable of a still wider application than drainage, and it can hardly be too strongly recommended to the attention of French farmers.

Owing to this increased quantity of manure, enhanced still further by all the artificial manures which the imagination has been able to discover, the return from cereals may be increased in the same proportion as animal production. Upon lands cultivated under the new methods, the average return amounts to forty-four bushels per acre of wheat, fifty-five bushels per acre of barley, and sixty-six bushels per acre of oats: as the extent of wheat-sown land is at the same time much increased, the total production is more than doubled. These are not mere speculations, but facts realised in many parts of the United Kingdom. In every county there is one farm at least where some rich proprietor is not afraid to make these trials, and the body of farmers observe, study, and, according to the extent of their resources, copy what is successful.

The whole of the system can only be advantageously practised in the districts most favourable to the production of cereals—that is to say, in the south-east, where the crisis told the most severely. In the west and north, cereals are being almost entirely given up. Division of labour thus makes a fresh step : the cultivation of cereals becomes extended upon the lands most adapted for them, and is diminished on those least favourable to their production. Upon the whole, it does not appear that the proportion of corn-sown lands ought sensibly to change. In those districts where the attention of farmers is being more and more directed to the feeding of cattle, the results obtained solely by means of stabulation and the use of liquid manure, if not better, are at least more certain. I will quote but one example—the farm of Cunning Park, in Ayrshire. This farm, which is only fifty acres in extent, was, previously to the crisis, in the average condition of England. The rent did not exceed 25s. per acre, and the gross produce £4 per acre ; now the gross produce reaches £24 per acre, and the net at least £8. Nevertheless, Cunning Park produces only milk and butter ; but as a result of the new methods, it now supports forty-eight in place of ten cows, and each of these cows is much more productive.

Such are the general features of the present agricultural revolution—high farming, as it is called. I must, however, point out one more circumstance which may serve still further to characterise the system—the war waged against hedges and game.

When pasturage was the leading feature in English farming, large hedges had their use, but as stabulation increased that use diminished ; they may, moreover, be replaced by low hedges or other enclosures. Farmers now find them only inconveniences ; they take up a

great deal of room, their shade and their roots are both hurtful to the crops, and they give shelter to a host of birds, which devour the seed. The majority of proprietors are still opposed to their destruction ; first, because the prunings and thinnings of the hedgerow trees bring them in an income, and then because these hedges contribute greatly to the beauty of the landscape. But some have already cleared them away, and the rest will have to yield, at least to a certain extent; for the public, impressed with the importance of the question, declares itself more and more every day in favour of the farmer. A similar fate is evidently reserved for the game, the increase of which has hitherto been favoured by the severity of the Game Laws, to the great injury of crops. Opinion, so favourable in England to large property, and at the same time so exacting with regard to it, begins to make it a matter of duty with landlords to sacrifice their pleasure to the new necessities of production.

While assisting in this peaceable contest, the issue of which cannot be doubted, one cannot help feeling that abuses of the same nature were one cause of the French Revolution. In order to preserve themselves from the ravages of the seignioral hares and rabbits, our farmers found no better method than to demolish the chateaus, and kill or drive out their proprietors. English farmers exhibit more patience and moderation, and they are no less successful in attaining their end without violence. Their only weapon is the obstinate representation of their grievances. They quietly calculate how many acres of land are thrown out of cultivation by large hedges—how many hares it takes to consume the food of one sheep. It is a common and frequent saying among them, that they are obliged to pay three rents—the first to the proprietor, the second to his hedges, and the third to his

game. In some districts they have clubbed together to purchase the right of shooting, and have then set about exterminating the hares, which pays better than killing the landlords.

All these works of drainage, construction of buildings for stabulation, erection of steam-engines, &c., involve great outlays. The expense to the proprietor may be estimated at about £8 per acre, and that of the farmer £4. On the strong lands it must necessarily be more, but on the light much less. This fruitful outlay accomplished and well executed, of course rents and profits rise beyond their former figure, and that even in places where they have been the least affected by the fall; it also produces an adequate return upon the new capital put into the soil. The land will then produce at least one-third more of alimentary substances. The gross average production, which was equal before to £3 per acre, will then be £4, 10s., while the average rent will probably rise to 30s., and the farmer's profit to 18s. per acre.

The only question is this, Are proprietors and farmers in a condition to furnish the required capital? The question is one involving no less an amount than four or five hundred millions sterling. For any other country than the United Kingdom such an undertaking would be impossible; for her even it is an arduous one, but only arduous. The nation which, in the course of a quarter of a century, has spent £240,000,000 upon railways alone, may well employ twice that amount in renewing its agriculture.

The Government felt the necessity for setting the example. In 1846, at the time when it was thought desirable to bring about lower prices, it allowed itself to depart from its established principle of non-interference

with private enterprise, and proposed to the proprietors to lend them £3,000,000 for draining, to be secured on mortgage, redeemable by payment of interest for twenty-two years at the rate of 6½ per cent per annum—a principle very like our General Land Loan Association (*Société général de crédit foncier*). This first loan having succeeded, Government made others, and a great number of proprietors in the three kingdoms have availed themselves of the advance. Private capital has followed the impulse. The suffering proprietors who were possessed of personal property, or had securities upon which they could borrow, passed through the crisis with credit; but those who were already embarrassed, struggled sorely. About a tenth of the English proprietors found themselves in this latter position, and for these, economists and agricultural authorities discovered no better remedy than to help them to the sale or division of their real property.

To do this at the present day is a difficult and expensive proceeding, owing to the uncertainty of titles. A class of lawyers live by the examination of titles, and the confusion which there reigns. It was proposed to adopt a system of registration like ours, in order to regulate and facilitate transfers: the ideas promulgated upon this subject are of the most radical kind. They go the length of requiring that landed property should be transferred as easily as the funds or other movable property, and demand no less than that a book should be opened for the registration of real property, legal extracts from which shall constitute titles, and these to be transferable by endorsation. Everybody must admit that we are far from holding antiquated ideas upon the fixity of property, and those who propose this reform are not visionaries, but serious writers, and justly respected.

The subject is even under the consideration of Government.

For the farmers, leases of twenty-one years are asked, which will allow them to make the necessary advances, with a certainty of reimbursing themselves. At the same time it is proposed to do away with the farms of too limited extent where the tenants have not sufficient capital, and to effect a subdivision of the too large for the same reason. Those farmers who have not sufficient capital drop off like the involved proprietors; such as remain close the ranks as in a combat, and in a short time all will disappear.

All this, no doubt, constitutes an immense revolution. Agriculture changes from a natural, and becomes more and more a manufacturing process; each field will henceforth be a kind of machine, worked in every sense by the hand of man, pierced below by all kinds of canals, some for carrying off water, others for bringing manure, and—who can tell?—perhaps also to convey hot or cold air as required, for effecting the most rapid changes on its surface; the steam-engine sends forth its columns of smoke over the green landscapes celebrated by Thomson. The peculiar charm of the English fields threatens to disappear with the green fields and hedges; the feudal character is weakened by the destruction of the game; parks themselves are attacked as depriving the plough of too much space. At the same time, property is undergoing a change; it is being divided, and in part passing into new hands; while the farmer, with long leases, becomes more and more enfranchised from the authority of his landlord.

There is involved in all this more than an agricultural question—the whole body of English society is affected

by it. It must not be supposed that the English make no revolutions ; on the contrary, they revolutionise to a great extent ; they are always at it, but in their own quiet way : thus they attempt only what is possible and really useful ; and one may be sure that at the close there will be complete satisfaction without the entire destruction of the past.

CHAPTER XIV.

THE SOUTHERN COUNTIES.

TAKING a rapid glance separately at each of the divisions of the United Kingdom, will only confirm what a preliminary examination of the whole system of English rural economy has already shown us.

England proper is divided into forty counties, the average area of which is about half that of one of our French departments, but they are very unequal in size. Rutland is scarcely larger than one of our cantons, while York alone is equal to two of our largest departments. They are commonly divided into five groups—southern, eastern, midland, western, and northern. I begin with the southern, the poorest of the five, because it is the first which presents itself to those arriving from France. This group contains seven counties.

Landing at Dover, we enter the county of Kent. French travellers are led to judge of England by the country they pass through between Dover and London. Kent, indeed, presents the ordinary features of English landscape, and may give to a foreigner a general idea of the rest of the island; but in reality it has a character peculiar to itself; and the English, more alive than we are to the differences, may truly say that it forms an exception to all the other counties. The exceptional points are everywhere visible, in the crops, the extent of the

farms, and even the laws which govern it. Kent once formed a distinct kingdom of itself, and in a country so tenacious of old customs, some remains of them are still found there.

Geologically speaking, Kent belongs to the great clay basin of which London is the centre. Such land, in the present state of British agriculture, being the worst cultivated and the least productive, this county may be considered in arrear of the greater part of the kingdom ; still it is not so far behind as the neighbouring counties of Surrey and Sussex, although the clay of these is not of such a refractory nature, and notwithstanding the benefit they must derive from the impulse which is given to industry by the great commerce of the Thames and the neighbourhood of the capital. The subsoil is calcareous. A line of chalk hills runs along the coast, forming those white cliffs from which the island received its name of Albion.

In 1847, the rent of land in Kent was nearly equal to the average; that is to say, 20s. to 25s. per acre, taking arable and uncultivated lands together. This is high, no doubt, compared to the average of rents in France, but nothing as compared to the central and northern parts of the island. English agriculturists disapprove of the mode of cultivation still practised in Kent, but it was formerly considered one of the best cultivated counties in the country. It has retained most of its ancient methods of tillage, which have been discarded by the wealthy and skilful farmers of the north. It may be said that the agricultural revolution commenced by Arthur Young has not reached this quarter, and that it follows more the old English system than the modern. The rich grass-cultivation, the pride and peculiar feature of Britain, is there little adopted. The wet lands by the

banks of the rivers form almost the only natural meadows, excepting, however, the celebrated Romney marsh, one of the richest pastures in the kingdom, situated upon the coast, and covering an area of about forty thousand acres. There the fine race of sheep, known as the New Kent, takes its rise, which combines with a high quality of mutton the advantage of a wool superior to other English breeds.

With the exception of this valuable breed of sheep, there is nothing remarkable in the stock of Kent: the great national types are not to be found there. The crops even are not what they ought to be, although for some time past improved methods of tillage have been spreading. The agricultural crisis fell severely upon Kent, and induced new efforts. Drainage is extending, and appears destined to alter the character of the clay lands; but, generally speaking, the old system prevails. Everybody must have remarked, in passing, the heavy plough of the district, drawn by four horses, when two would suffice,—and all the rest is just in keeping.

While the entire island devotes itself to two or three main crops, Kent remains faithful to those special productions which have acquired for it the name of the garden of England. It grows half the hops produced in the kingdom. In the Isle of Thanet, all kinds of seeds are produced for the supply of the London seedsmen; while those parts nearest to the capital are occupied by kitchen gardens on a large scale. There are to be seen orchards, and whole fields of vegetables. The number of villa residences belonging to the wealthier inhabitants of London is also considerable. The extent of the farms varies a good deal, but small and middling farming prevails. Many are not more than ten to fifteen acres, few exceed two hundred acres. The reasons for this are many; but the

chief cause is to be found in the peculiar laws which relate to land in this part of the country.

In Kent, the fixed property of the head of a family dying intestate, does not by law descend absolutely to the oldest son, as is the case in the rest of England. Lands, except such as come under a special act of the legislature, are held in *gavelkind;* that is to say, divided in equal portions among the sons of the father dying without a will, and, in default of male children, among his daughters. This is supposed to have been the common practice in England before the Norman conquest, but it now exists only in Kent and a few other localities. This ancient custom, more than anything else, has tended to the subdivision of land; and in this respect, as well as in some other particulars, Kent resembles more a province of France than an English county. It is true that the national feeling is against this dispensation of the law, which is not the case with us. Most parents take care to provide for the oldest son by will; others desire to have their property placed by special law upon the footing of equal right. The number of yeomen, or proprietors who cultivate their own lands, is still considerable in Kent; but this class, found only there and in certain mountainous districts, begins to disappear before the new constitution of property and farming.

Kent is among the most populous counties in England; it contains about five hundred and fifty thousand inhabitants* upon an area of one million acres, or more than one head to two acres, which is about the same population as our department of the Bas-Rhin. Fortunately this population is not solely dependent upon its agriculture for subsistence. If industry, properly speaking, is rather inactive, commerce at least is flourishing, owing

* By the last census, six hundred thousand.

to the numerous ports upon its coast. The condition also of the people appears to be better in Kent than in the neighbouring counties. The average wage of a working man is about 12s. a-week, or 2s. per working day.

Upon the whole, Kent does not exhibit any striking feature, either good or bad, to the observer. In general appearance, as well as from its situation, it forms a sort of transition between the north-west of France and England. Greatly superior as an agricultural country to the average of our departments, it is, upon the whole, inferior to our best, such as the departments of the Nord and Seine Inferieure. Travellers generally pass rapidly through it in order to get to London ; we shall therefore linger upon it no longer. Everywhere else but in England, a district which had arrived at this point of production and population would be worthy of more minute observation, but here it is nothing out of the common. Even the scenery, which the English talk so much about, is pretty without being very remarkable. In nothing is it beyond the average, whether in picturesque beauty or agricultural richness.

To the south-west of Kent lies the ancient kingdom of the southern Saxons, now the county of Sussex. The average rent of land here falls to 18s. per acre. Wages also are lower than in Kent, the average being 10s. per week, or 1s. 8d. per working day.

The area of Sussex is nearly equal to that of Kent. The population is only three hundred thousand,* or a little less than one to three acres. What is called the *Weald* occupies about half its area, and is perhaps the most backward part of the whole of England in point of agriculture ; this is mostly attributable to the extremely

* By last census, three hundred and thirty thousand.

argillaceous nature of its soil. In former times this part of the country was covered with dense forests, as indicated by its name, which signifies wood. It was here that the once extensive forest of Andraswald grew, where Sigebert king of Wessex was slain by a swine-herd. The Weald is still famed at the present day for the number of fine trees which it produces. It is divided into farms of from fifty to two hundred acres, rented at from 5s. to 15s. per acre, but even at these rates most of the farmers cannot make it pay. Generally speaking, they are men without capital, and as ignorant as they are poor; before the low prices, they had scarcely anything to live upon, and now they are extremely ill off. Wherever rents are high in England, farmers are better off than where they are low; poverty and inferiority seem to league themselves together in the one case, and success with wealth in the other.

Improved implements are little known in the Weald; thrashing with the flail is still practised there. This is the only part of England, too, where they still employ oxen for tillage. These animals, which are strong and of a large size, are a contrast to the other national breeds; and the cows, as is the case with all working races, are bad milkers. In passing through the Weald, one might fancy they were in one of our second-rate provinces.

The Duke of Richmond, who is one of the largest landed proprietors in England, and who pays a good deal of attention to agriculture, has his principal seat—Goodwood—in Sussex. He was one of the leaders of the crusade against Free Trade.

It is evident that the Weald cannot remain in its present state. To use the expression of Sir Robert Peel, nowhere is a large infusion of capital more necessary: but

this capital is not easily found ; it does not exist, certainly, on the spot. The proprietors themselves, not being wealthy, are scarcely better able than their tenants to make advances. The money must come from other quarters, by a change either in the farming or the property, although such crises are always to be lamented. If the large system of farming is to be introduced—and in the existing state of ideas and capital in England, it is difficult to see how the resistance of the soil can be otherwise overcome—what is to become of that population of small tenant-farmers which for generations have gone on increasing under shelter of the old system ? These unfortunates, who have cultivated their native soil for generations past, will be forced to emigrate. Such is the decree of modern fate : whoever does not know how to produce enough, is rejected as a burden on the community.

Several successful attempts demonstrate what the land of Sussex may become in the hands of men of ability and capital. Among these, as foreshadowing its future, is the farm of Hove, near Brighton, tenanted by Mr Rigden, containing about 740 acres, and let for £1300, which makes the rent equal to 35s. per acre. The taxes amount to £150, insurances £100 ; altogether about £1550. The annual working expenses are £3000, divided as follows : wages, £1700 ; tradesmen's accounts, £350 ; cost of manure and seeds, £950; total annual expenses, £6 per acre. Besides this, Mr Rigden expended on entering the farm £12,000, or about £16 per acre, to bring it into condition. This capital, according to the recognised rule in such cases in England, ought to give a return of ten per cent. Mr Rigden should, therefore, in order to be recompensed, obtain a gross return of about £7, 12s. per acre, or a total of £5600. This is

a specimen of large English farming in all its magnificence.

The following is the rotation followed: forty acres in permanent pasture; of the remaining seven hundred, half is in grain, and the other half in forage crops. The three hundred and fifty acres of grain are thus divided: wheat, two hundred and fifty; barley forty, and sixty in oats. Of the three hundred and fifty acres in forage crops, twenty are in beetroot; twelve, turnips; forty-two, swedes; six, carrots; fifty, potatoes; ten, cabbages; and the remainder in clover, rye-grass, lucerne, sainfoin, and vetches. This proportion differs a little from that usually followed in England, inasmuch as it gives a greater breadth to wheat and a less to turnips; but this is owing to the nature of the soil, which is more suitable for wheat than barley, and for roots than green crops.

Mr Rigden has sold every year, even after the reduction in prices, more than £2400 worth of wheat and barley. The stock he keeps is as follows: three hundred and fifty Southdowns, of the best breed; twenty tups; twenty-one milch cows; twenty-eight farm-horses, and a small number of pigs. He does not fatten sheep, but sells annually about two hundred and fifty lambs of six months, and about a hundred ewes of four years old, which he replaces from his younger stock. This branch of his farming brings him in about £500. On account of the high reputation of his stock, his young lambs fetch 20s. a-piece, and the ewes and rams more than double that price. His milch cows give an average of nearly twelve quarts of milk per day; this milk sells at Brighton for 2d. per quart, making the return from each cow about £35 a-year. Taking into account the sale of calves and fattened cows, this department brings in some £700 or £800. In addition, Mr Rigden must sell about £2000 worth of

straw, hay, and potatoes. For his hay and straw the vicinity of Brighton insures a market, owing to the number of horses which are there during the bathing season. Of his twenty-eight farm-horses, seven are almost constantly employed carrying produce to market and bringing back manure.

Mr Rigden's example has hitherto had few imitators; everybody, indeed, has not £12,000 to invest in a farm, especially in a district like Sussex, where agriculture has suffered for a length of time. Nevertheless a beginning has been made, and it may be confidently asserted that in the course of a few years the transformation will be in full play. Two railways—one from Dover to Brighton, and the other from Tunbridge to Hastings—cross the Weald, while other two lines skirt it, the Dover and London, and Dover and Chichester. Its situation brings it close to the two great markets of London and Brighton, and under such circumstances it is scarcely possible for it to escape the influence of the revolution now going on in agriculture.

Next the Weald, the county of Sussex presents one of the most primitive and prosperous districts of Great Britain—what are called the Southdowns. The soil of these hills is poor and arid, and resists all attempts at cultivation. This very sterility has proved their fortune. From time immemorial they have been covered with flocks of sheep, that feed upon the short but sapid grass, which is manured by their excretions. We have already noticed that the sheep are the stock of the breed called Southdowns, now the most esteemed. The chief amusement of the wealthier classes of the English who flock to Brighton in the season, is riding over these immense downs, where there is nothing to interfere with them—no trees, and very little heath or shrubs, but one

uninterrupted green carpet of fine close grass. Under this apparent neglect, however, and leaving of the land to itself, this desolate-looking country, inhabited only by sheep, is nevertheless the field of a skilful and lucrative kind of farming.

Rents in Surrey should be pretty much the same as in Sussex, for the soil naturally is not better. The southern portion of the county touches the Weald, and partakes of all its disadvantages. On the west is another kind of barrenness, consisting of unsound moors, which farming has not yet everywhere ventured upon, because it would not pay the expense of cultivation. As for the north and east, London occupies the whole of this with its environs and immense dependencies; all the right bank of the Thames at London, occupied by the borough of Southwark, is part of the county of Surrey.

Surrey, therefore, is of no importance as an agricultural county; its large population is more urban than rural. It is, besides, of no great extent, having an area of only about 450,000 acres, about equal to one of our arrondissements. It is, however, the county most visited by foreigners, owing to its vicinity to London, and the number of fine residences, regal and other, which it contains. Kew, Richmond, Hampton Court, Twickenham, Claremont, and Weybridge, are all within it; and Windsor, the Versailles of England, is quite close. The beauty of Surrey has always been celebrated, and not without reason. A few miles above London, the Thames is neither more nor less than a park river, whose clear waters, covered with swans, wind through green meadows and under the shade of magnificent trees; its banks are studded with mansions and parks, interspersed with elegant villas and pretty cottages; well-kept roads,

running throughout this enchanting country, disclose its beauties at every turn.

Every nation has its peculiar taste in gardening. The Italian gardens are works of art, where sculpture and architecture subject even the trees to ornamental effect; French gardens consist of long alleys cut in deep woods, and elegant parterres where verdant shrubs and flowers mingle their colours and forms. English gardens have nothing of this; they are entirely rural. The taste of the people is pastoral; they are essentially agriculturists and sportsmen even more than naval. Properly speaking, they have no woods, but trees scattered here and there over large grass fields; and instead of footpaths, they have roads: nothing artificial, or having the appearance of arrangement—real country, brought to perfection by the freshness of the turf, the beauty of the trees and flocks, depth of horizons, and happy distribution of water —the useful and pleasurable, in fact, united; art aspiring no further than to separate nature from its roughness and decay, in order to leave it adorned with all its loveliness and fruitfulness. Such is the appearance which the county of Surrey presents. The *undulating* character of the country (as the English, who like to apply sea terms to things on the land, call it) adds beauty to its perspectives. Thomson thus sung more than a century ago :—

> "Say shall we ascend,
> While radiant Summer opens all its pride,
> Thy hill, delightful Shene! Here let us sweep
> The boundless landscape.
>
> . . . . . .
>
> Heavens! what a goodly prospect spreads around,
> Of hills, and dales, and woods, and lawns, and spires,
> And glittering towns and gilded streams, till all
> The stretching landscape into smoke decays!
> Happy BRITANNIA! where the Queen of Arts,
> Inspiring vigour, liberty abroad

Walks, unconfin'd, even to thy farthest cots,
And scatters plenty with unsparing hand.
. . . . .
Unmatch'd thy guardian oaks; thy valleys float
With golden waves; and on thy mountains flocks
Bleat numberless; while, roving round their sides,
Bellow the blackening herds in lusty droves."

Every Englishman who enters Surrey cannot fail to respond to these lines. It is not the soil, however, which has done these wonders, because, naturally arid in the high, and marshy in the low grounds, it has been brought to its present state only by dint of labour.

Even the commons, which are here and there to be met with, covered with their furze and broom and heather, contribute by their wildness to give an agreeable variety to the view. Everything in England has its charm for the English; and so, in fact, has the uncultivated land in the midst of the cultivated. These commons are intersected by numerous paths, and filled with people wandering about; they are, as it were, *souvenirs* of the ancient state of the country,—a kind of prelude to those immense Highland moors so dear to tourists and poets. The young Amazons of the neighbouring villas there gallop their horses with the same freedom as if they were riding over an American savannah, and a foreigner cannot but admire that ingenuity which can turn the poverty of the soil into a source of pleasure and luxury.

Every part of this suburb of London has its historical recollections. The greatest men of England—statesmen, poets, and warriors—have resided there. Even we Frenchmen begin to stock it with sacred spots; the greatest wrecks of our civil discords have there sought refuge. In a small chapel in one of those quiet country villages—Weybridge—repose the mortal remains of King Louis Philippe, not far from Twickenham,

where he spent part of his youth, and close to Claremont, where he died, after wearing a crown between two revolutions. The whole modern history of England and France agrees in this, that here is always storm, there always peace.

Hampshire comes next to Sussex, continuing along the south coast. People arriving in England from France, and disembarking at Southampton, make acquaintance first with Hampshire, as those landing at Brighton do with Sussex, and with Kent when they land at Dover. This county is considered to be one of the most agreeable as a residence, on account of its mild and healthy climate. The Isle of Wight, for which the wealthier class of the English have such a predilection, and where the Queen has her favourite residence, belongs to Hampshire.

Generally speaking, the soil is bad, especially towards the north. There was formerly an immense moor here, known as Bagshot Heath — the Sologne of England. Several portions of it have been cleared, and others planted with pine trees; but for the most part it remains in its original state, and what has been cultivated has not paid the expense. Moors again make their appearance towards the south, where there is a large forest, called the New Forest, made by William the Conqueror, who, it is said, destroyed towns and villages, and interdicted population over an immense space, that he might have it for a hunting-ground. It is this open and desert space which was then called, and still retains, the name of Forest, from the old French word *fors*, without, derived from the Latin. The ground, left in a state of nature, gradually became covered with brushwood, and then with large trees; this is the origin of most of the existing forests. The New Forest covers sixty-five thou-

sand acres, and belongs to the Crown. Remains of other forests in the county are still to be met with.

The character of Hampshire, then, is a country of ancient forests and heather. The heather supplies food for a race of small but excellent sheep, known as Bagshot sheep. The oak forests, similar to those described in the novel of *Ivanhoe*, provide food in like manner for herds of swine, which furnish excellent bacon, that of Hampshire having still the highest reputation. This county, although to a certain extent modified by cultivation, still retains much of its original aspect; there are plenty of fine trees in it, and large tracts of heather and wood are to be met with. The New Forest is famous for its wild scenery. Rents there are low enough, the average being 15s. per acre; but this low average is caused by the quantity of inferior land producing nothing but woods or bad pasture. The population, more numerous certainly than might be supposed, considering the nature of the land, amounts to about one head for every three acres. It is true, a portion of their means of livelihood comes from extraneous sources, and that more so even than in Kent. The ports of Southampton and Portsmouth, the one commercial, the other military, are places of great activity.

In the poorer districts, single farms contain as much as one thousand, two thousand, and three thousand acres. In the southern part of the county they are less, ranging from about one hundred to five hundred acres. The large farms are almost entirely devoted to sheep, and the race has been greatly increased in number, though not improved in the quality of the meat. The race of pigs is no longer that tall, active, and strong race of former days, but one that fattens better and more quickly.

The New Forest, with Windsor Forest in Berkshire,

and some few others, are all that remain of the ancient forests of England. The existence of the New Forest is threatened just now on the score of its harbouring poachers and depredators, and also that the ground it occupies might be advantageously parcelled out and sold, either for farms or parks. In England the prejudice against clearing land is not so great as it is in France, there not being the same need for wood for fuel; and the advance in population has been so rapid that it is very necessary to look about for means for its support. It is perfectly evident to everybody, that it is for the general interest to render the land as productive as possible; and to keep that in wood which might be producing something better, is submitting every year to a very considerable sacrifice. On the other hand, considerable importance is still attached to the royal forests from considerations connected with the navy. It is contended that they alone are capable of furnishing the oak necessary for building ships of war, those moving bulwarks of England; but even that reason has lost much of its force, for it has been shown that it is much cheaper to import foreign wood for naval purposes, than to produce it in the State forests.

The New Forest, therefore, is no longer defended, except by the residents in the neighbourhood, who enjoy those privileges everywhere attaching to public domains, and by those who take delight in grand natural scenery. These considerations will probably be insufficient to withstand the expression of public opinion, which aims at its being broken up.

Moreover, it is to be observed, that the destruction of forests does not imply that of the large trees: far from it. If England has less wood than most other countries, she possesses more fine trees. Most of her counties

present the aspect of a well-wooded country; but the trees are scattered among the hedgerows, in the parks, and along the roads. They are not packed together, and, with the exception of a few patches of coppice here and there, do not undergo those regular cuttings which, with all our eight millions of hectares of wood, make it with us a rare sight to see a solitary tree. At the same time, lands which are unfit for anything else are planted. The art and taste for plantations are now widely extended in England, and give promise to be a future great source of wealth, on account of the variety and choice of the means and the intelligence and care which are brought to bear upon this as well as all other cultivation.

It is the forest properly so called which the English suppress; that is to say, those large tracts abandoned to natural wood, or where, perchance, wood may not grow at all. Their object is, not to confound land fit for growing corn with those lands which are inferior and condemned to comparative sterility, simply because, in times past, there happened to be a wood in that particular spot. To grow corn on corn lands, and timber upon land not suited for cultivation, and everywhere else to make use of trees as shelter and screens, as well as for ornamental purposes,—to have, in fact, a sufficiency without having too many of them, but to respect them and defend them from the hatchet;—this is the system, and I think it a good one.

Strathfieldsaye, presented by the nation to the Duke of Wellington, lies in the north of Hampshire. This, again, is one of those stiff clay-soils so difficult to work. The Duke laid out the whole rental upon improvements of all kinds. He spent large sums in draining, marling, and farm-offices,—and to very little profit. Such an outlay upon a less rebellious soil should have given ten times

the result; but the old soldier persevered in this struggle, as he did in former days upon fields of battle. He belonged to that class of large proprietors, more numerous in England than elsewhere, who consider it a point of honour, as well as duty, to be stronger than their land. He was much beloved by his tenants and neighbours, who benefited by his liberality. The Duke caused commodious and comfortable cottages to be erected for his labourers, with about two perches of garden ground attached to each. These he let at the rate of 1s. per week, payment for which he took in labour.

Dorset is the next county to Hampshire, following the coast line. Here the aspect of the country changes. In place of the wooded hills and dales of Hampshire, we find extensive calcareous downs—bare, without trees or shelter of any kind; possessing a scanty population of about one to three acres; few habitations; very few gentlemen's seats; very extensive farms; in point of agricultural wealth, rather inferior to Hampshire, but having a higher average of rent. This county being dull and uninteresting, there is nothing to take attention off production, which being obtained without much labour, a larger return comes to the proprietors.

Most of the county is in pasture. Agricultural occupations are principally the rearing of sheep for the butcher, and the care of milch cows for the production of butter. Upon this poor and dried-up soil, greatly resembling the Downs of Sussex, any other system of culture would probably be attended with difficulty. Turned to account in this way, it can afford an average rent of about 20s. per acre. Dorsetshire, being little engaged in either manufactures or commerce, and having scarcely anything but its agriculture to depend upon, is one of the parts of England where wages are lowest, although the population

is by no means dense. Labourers' wages do not exceed 7s. 6d. per week ; a rate considered quite insufficient in England.

Mr Huxtable, one of the boldest pioneers of English agriculture, resides in this county. This gentleman was one of the first to assert the opinion, as he did in a pamphlet, that, even at the low prices, English farmers could retrieve themselves if they kept up their courage. One can imagine the storm raised by such an assertion. Mr Huxtable was treated as a public enemy, although himself a farmer, as well as rector of the parish of Sutton Waldron. He has two farms, upon which he puts his theories to the formidable proof of a practical demonstration. The one, situated a mile from Sutton Waldron, and the least important of the two, is that upon which the distribution of liquid manure by means of subterranean pipes was first practised. The other, containing two hundred and eighty acres, lies upon a bare calcareous hill, much exposed, and rising abruptly for several hundred feet. It was at one time almost in a state of nature, but is now admirably cultivated. Here are to be seen all the new methods carried out in some measure from their source. Mr Huxtable's farm-offices are particularly worthy of notice, from the great economy of their construction. Generally speaking, the English care less for show in their farm-offices than we do: they sacrifice nothing to appearance ; all they seek is utility. Mr Huxtable's cattle-sheds are constructed with hurdles of broom and branches of trees, roofed with straw; but nothing which may contribute to the health and comfort of the animals has been neglected.

The remaining two southern counties are mountainous, and of granite formation. Devonshire, which comes next

to Dorset, contains about one million six hundred and fifty thousand acres. Famous for the beauty of its scenery and the mildness of its climate, it is no less worthy of attention in an agricultural point of view; for in this respect great progress has been made during the last five-and-twenty years. In mountainous parts as well as in clay districts, and in general whenever the land requires much labour upon a confined space, the fields of operation become naturally much divided. Small farms abound in Devonshire, say of from ten to fifty acres; but these poor farmers are not those who have contributed much to the rapid advance in farming. It is upon the larger farms of five to six hundred acres that improvements have been carried on, which have changed the face of the country. The small farmers profit subsequently by the examples set them.

In no part of England has irrigation been carried to a greater extent than in Devonshire. The streams which run through granitic soils are particularly fertilising, and the land there lies very favourably for such works. It may be said that there is not a stream in all the county, however small, which is not collected and turned to account. The new breed of cattle is justly reckoned one of the handsomest and most productive in great Britain. It is below the average size ; but, for symmetry and the excellence of its beef, there is no breed superior. The cows do not give much milk, but the quality of the butter made from it is celebrated. It is, in fact, butter and cream alone which the numerous dairies of Devonshire supply. Cereal cultivation is very limited, the soil being more suitable for green crops. The country is covered with apple trees, from which a great deal of cider is made. The grass fields and orchards give this part of England very much the appearance of Normandy.

Rents in the neighbourhood of Exeter rise to 30s. per acre, the average for the rest of the county being 20s.

Cornwall, the most southern of the English counties, occupies the extremity of that long narrow peninsula running between the Bristol and English Channels, and is covered with a mass of barren mountains. As, however, from its insular position the climate is equable and mild, especially on its western side, agriculture is more advanced and productive than one might have expected. The population numbers about two to five acres, which is very large for such an ungrateful soil. The tin and copper mines of Cornwall employ a considerable number of people ; and another occupation—that of fishing—also gives employment to a number of hands. Agriculture holds only a third place among the occupations and resources of the county. The good effects produced upon farming from proximity to industrial occupations, are everywhere observable in this naturally wild and retired part of the country. The ordinary rent of these inferior lands is from 20s. to 25s. per acre.

CHAPTER XV.

THE EASTERN COUNTIES.

We now cross the Thames and enter the eastern district. Middlesex is the first county which meets us; but, properly speaking, it has no agricultural importance, for, besides being one of the smallest—containing only about one hundred and eighty thousand acres—it is almost entirely occupied by the immense metropolis of the British empire.

Beyond the town properly so called, all that is not in villas or gardens is under grass, either natural or artificial; the hay from which is sold in London, or goes to supply the dairies of the capital. Proximity to such a large population affords enormous supplies of manure, by which the fertility of the soil is renewed as it becomes exhausted by incessant production. It is admitted, however, that farming in the neighbourhood of London is not altogether what it might be. High as rents for arable land are—averaging 40s. per acre—they do not exceed, nor even reach, the rate paid in some other parts of England. The state of agriculture which prevails in the surrounding counties makes itself felt up to the very gates of the greatest existing centre of consumption. Farms in this part of the environs of London average one hundred acres in extent. There are some of three and four hundred, but a great number are below one hundred. Among the most skilfully managed is one at Willesden, only three

or four miles distant from Regent's Park. It consists of one hundred acres entirely in grass, of which sixty is natural meadow, and forty Italian rye-grass. It is let at about £3 per acre ; the tenant, besides, paying tithes and other taxes, amounting to about 15s. per acre more.

Immediately to the north of London is the small county of Hertford, which, like Surrey on the south, is filled with villas and gardens. It possesses one of the most curious and remarkable establishments in England, namely, the laboratory of agricultural chemistry belonging to Mr Lawes of Rothhampstead Park, near St Albans,—the only establishment of the kind now existing, since that established at great expense by the Agricultural Institute of Versailles was destroyed. A private individual has established, and supports at his own expense, a costly enterprise, which elsewhere governments have declined to undertake, and which will be of immense utility to the whole country. All England looks to the results of experiments there carried on, and it has already furnished valuable information respecting the different kinds of manures best suited to the various kinds of crops and soils. Mr Lawes' laboratory is upon the scale of a regular manufactory : a steam-engine of ten-horse power; a cast-iron stove eight feet long ; enormous furnaces ; everything, in fact, fitted for carrying on his experiments. The entire carcasses of cattle are there reduced to ashes for the purpose of exact analysis. M. Payen, who is a good judge in such matters, has seen these arrangements, and expressed his admiration of them in a report which has been published. A piece of ground of twelve or fifteen acres, divided into twenty-eight compartments, serves as a field for trying experiments with the different manures.

Any one who has with a little attention followed the movement in agriculture at the present day, must be satis-

fied that the time is approaching when further progress can only be made by means of what is properly called Science. All that expense can do has been nearly done already. The world still advances, population goes on increasing, and the comforts of life are more generally diffused. What was sufficient for yesterday is not enough for to-day; and what is enough for to-day will not satisfy the wants of to-morrow. We must continue unceasingly to draw new treasures from our common Mother Earth. We should have nothing but famine, depopulation, and death before us, had not God, who daily gives us so many new wants to satisfy, supplied us at the same time with a powerful mean for warding these evils off. This exhaustless mean is Science. Science, which fills the world with its wonders; which has supplied the electric telegraph, enabling us to communicate instantaneously from one end of the earth to the other; which has given us steam, and, perhaps ere long, heated air, to transport vast multitudes of men and merchandise by land and sea; which in the workshops of industry produces so many wonderful changes in inert matter; but which has scarcely as yet been tried on agriculture. Nothing serves better to show the progress making in agricultural chemistry in England, than a quarter of an hour's conversation with the first farmer one meets. Most of them are already familiar with the technical terms. They talk of ammonia and phosphates like professed chemists, and are quite alive to the unlimited field of production this study may open up. Cheap publications upon the subject abound, and lecturers paid by subscription hold forth throughout the country. In London there is a thriving school of chemistry and geology as applied to agriculture, under the direction of Mr Nesbit.

After these two counties comes the ancient kingdom

of the East Saxons, now the county of Essex, containing, like Sussex and Kent, about one million of acres, and in point of history very similar to these. Notwithstanding its proximity to London, however, we shall not find it in a better condition. It almost all rests upon the clay; owing to which, as in similar districts of Sussex, the system of farming is that which has cereals for its object. From the same cause, also, there is a greater division of property and farming than in three-fourths of England. The generality of farms are from one hundred to three hundred acres, and many are cultivated by their own proprietors. Formerly the agriculture of the county owed a relative prosperity to these different circumstances. At the beginning of the present century rents averaged 20s. per acre, and rose gradually to 25s. ; but since strong lands lost favour, this was followed by a downward movement, which reduced them nearly to their former figure.

This falling off in the return produced the ordinary consequences ; properties, generally speaking, have been mortgaged to the extent of more than half their value. The English do not fail to attribute this to their too great division. Whatever be the cause, the evil was real, and it left the proprietors defenceless against the crisis. The result has been a pretty large number of forced sales, which has lowered the average value of the land by one-fourth, or probably a third.

Fortunately for Essex, it possesses, like its neighbours, one of those energetic individuals who anticipate the future while seeking by every means to escape from the difficulties of the present. In one of the worst parts of the county, near Kelvedon, is situated the famous farm of Tiptree Hall, belonging to Mr Mechi, a cutler in the City, who is devoted to agriculture.

All our agriculturists who have visited London have been to see Mr Mechi's farm: it is now very generally known even in France. All that the inventive spirit of the English could imagine to make the soil produce to its utmost extent, and especially to overcome the resistance of clay lands, is directly employed by that indefatigable inventor. It must not be supposed, however, that Tiptree Hall presents the true state of English agriculture; it is not even that which is likely to prevail over the greater portion of the country, for some of its principal features are there wanting entirely. But it is one of the most complete *résumés* of the vigorous efforts making for some time past to improve stiff land, and at the same time affords a striking example of the social and political character of the revolution now going on in agriculture. It was a movement essentially of an aristocratic character which, since the time of Arthur Young, has so greatly advanced English agriculture: that which promises at the present day to cause another stride, and of which Mr Mechi is one of the most active agents, is, I will not say democratic, but urban (*bourgeois*).

Mr Mechi's farm, which is his own property, contains one hundred and seventy acres, the average size of both property and farming in the county; but in one respect it does not keep to the average, and that is in the disbursement account. Mr Mechi purposely chose his farm upon marshy land which had hitherto resisted all kinds of culture; and he has taken care to leave all around a specimen of the land as it was, to show its former state. Everything had to be made; first, the soil, which Mr Mechi relieved of the stagnant water by thorough-draining, and then turned it up to the depth of two feet, and transformed it by means of the most powerful fertilisers. Mr Mechi has built an unpretending house upon the pro-

perty, with barns and stables, which make no great show outwardly, but the internal arrangements are most complete, according to the new system. In the centre of the property is a steam-engine, the soul, as it were, of this large body. There he feeds, in addition to working horses, one hundred horned cattle, one hundred and fifty sheep, and two hundred pigs, or equal to about one head of cattle per acre; and these animals, entirely stall-fed, grow and fatten almost perceptibly. There is scarcely any natural pasture on the farm—one-half is in wheat and barley, the other half in roots and artificial fodder. Owing to the immense quantity of manure from the animals, and the no less enormous amount of extra manures which Mr Mechi purchases every year, the crops obtained are magnificent, while at the same time the land, instead of becoming exhausted, is constantly increasing in richness.

Mr Mechi visited Paris with the Lord Mayor of London. He speaks French, and one cannot confer upon him a greater pleasure than to go and see his farm. Both the man and the place are curiosities. It is said that he sinks a good deal of money on his experiments, and I can easily believe it; but I prefer this extravagance to most others. In his position, a Parisian who had made money would have an elegant villa with a Gothic summerhouse, Swiss cottage, and all sorts of ostentatious and often useless absurdities. I would ask, which of the two is the best?

If in Essex we see at Mr Mechi's a specimen of the revolution now going on, in the adjoining counties of Suffolk, Norfolk, Bedford, and Northampton, we witness the results of the agricultural and social revolution which took place about sixty years ago. At the close of the last century, the lands in this district were in a more

miserable and neglected state than those in the south at the present day, and their poor and sandy character seemed to offer far fewer resources to the cultivator. It was never thought possible to turn the greater part of them to better account than as large rabbit-warrens; but now they rank among the richest and best. What mercantile adventure, moderate-sized farming, permanent stabulation, drainage, and steam, have done in our day for stiff lands, large property, large farming, and the four-course rotation accomplished then for light soils.

Arthur Young was born in the county of Suffolk, and, like all great men, made his appearance just at the proper time. He came when, an impetus having been given to the industrial arts, it became necessary to think about increasing the production of food with a diminished number of hands, in order to supply the wants of the new population which was about to crowd the workshops. At the same time the revolutionary state of France fostered the aristocratic feeling in England. Money in those days was not so plentiful as now, and large amounts of capital were confined to a few hands. Everything tended to favour large property and large farming, and the lands most free for the purpose were just those best suited for carrying on large operations. Hence the great success of Young's system, which up to the present day has acted like a second charter for the English.

Suffolk has not herself profited most by the example which she set. No man is a prophet in his own country; and the ill success of Arthur Young as a farmer militated against his authority as a reformer in his own neighbourhood. Besides, a large portion of the county partakes of the clayey nature of the neighbouring soils to the south; in the north alone light soils are to be found, at least to any extent. It is to Arthur Young especially

that Suffolk owes its fame as being the seat of the largest manufacture of agricultural implements in England. There are to be found the celebrated establishments of Messrs Ransomes of Ipswich, Garrett of Leiston, &c. These immense factories testify to the extensive use among English farmers of the heaviest and most costly machines. A similar trace of M. Mathieu of Dombasle remains in the department where he lived; the recollection of that great agriculturist, who in some respects resembled Arthur Young, is preserved more particularly by a manufactory of implements.

Norfolk has been the true theatre of the success of Arthur Young. The north and west of this county forms an immense sandy plain of 750,000 acres, where there is no obstacle to large property and large farming, and where everything favours horse-tillage, cultivation of roots, the use of machines—in one word, the four-course rotation. By means of this system, steadily pursued for sixty years, these inferior lands, producing scarcely 5s. per acre in 1780, now return, on an average, 25s. per acre, or five times their former net production; and the gross production has risen in at least an equal proportion.

A large part of the credit due to this wonderful transformation belongs to an extensive proprietor in the county, the friend and disciple of Arthur Young—Mr Coke, who, in acknowledgment of his services to agriculture, was created Earl of Leicester. He died a few years ago, at an age not far short of a hundred. Mr Coke had a large property in the west of the county, called Holkham, containing about thirty thousand acres. This immense estate, which is now worth at least £1,200,000, was worth at most £300,000 in 1776, when Mr Coke inherited it. It was then in the occupation of a great number of small

farmers, who paid their rents very badly, although these were very low; and ultimately a great many of them abandoned their farms altogether, because they could not make a livelihood out of them. It was then that Mr Coke decided upon farming a portion of these sandy wastes himself; the rest he put into very large farms, and, by offering leases of twenty-one years, held out an inducement to farmers of intelligence and capital to take them. It is estimated that in the course of fifty years Mr Coke expended £400,000 in improvements of all sorts, which caused the farmers to lay out about as much more —an excellent investment on the part of both, since they have all made money by it.

Any one who wishes to get an idea of this period in the history of English agriculture ought to visit Holkham. The farm which Lord Leicester personally directed lies in the park belonging to the mansion. Its extent is 1800 acres, 500 of which are in permanent pasture; the rest is arable, laid out exactly for the four-course rotation. The farm maintains 250 large cattle, 2500 southdown sheep, and 150 pigs. An equally profitable visit may also be paid to Castleacre, a farm of 1500 acres, and several others in this district also deservingly famous. It will be found that the same principles are everywhere applied upon as large a scale, and followed by similar results. The whole of this land formerly grew only rye; now it does not produce a particle of this grain, but instead are to be seen the finest wheat crops and the best cattle in the world. The present Earl of Leicester is a worthy representative of his father.

The agricultural amelioration of Bedfordshire has been no less complete and rapid than that of Norfolk. Less than a century ago, three-fourths of the county consisted of nothing but waste commons. These unproductive

lands have been gradually divided, enclosed, and cultivated, and, owing to the four-course system, now rank equal to the full average of English lands. As in Norfolk, we here also find an influential and energetic promoter of the revolution—the celebrated Duke of Bedford—who, like Lord Leicester, has realised an enormous fortune. A visit to Woburn, the seat of the Bedford family, with the farms belonging to it, is the necessary sequel of a visit to Holkham. Besides the galleries of historical paintings, adorned with portraits by Van Dyke, which at every step revive recollections of illustrious members of the house of Russell, princes, and great men of their time, there are other galleries filled with models of ploughs, representations of animals of different breeds, samples of agricultural produce—in fact, a complete agricultural museum. Of these trophies the Bedford family is no less proud than of the others.

The conduct of the present Duke towards his tenantry presents another model for imitation. He caused all his rents to be revised after the crisis, and offered new terms to his tenants, such as they willingly accepted; he built for his labourers excellent cottages, with small gardens attached, schools for their children, churches, &c. These benevolent acts do not ultimately involve any sacrifice; all that is necessary is the advance of money. In fact, the rent of his property has not been sensibly diminished, but will even be increased in consequence of the extensive works in draining, farm-offices, and other substantial improvements which he has effected. The assistance afforded by the Duke to his tenants has been more apparent than real. In giving them the option of a lease at a fixed or a grain rent, he restored their confidence and excited emulation. An English farmer is capable of any effort, when he feels confident that

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he is under a good landlord, who does not tie him down too strictly, and who will help him at a pinch. Again, the clean and comfortable cottages provided for his labourers are not given them for nothing; they pay a good rent; and it is quite understood that a proprietor who builds a village should get a return of at least three per cent for his money.

The Duke has likewise cut down all his large hedges; and he was one of the first to give up the greater part of his shootings. With him everything is subordinate to utility. In the middle of his park, adjoining his home farm, is a factory which employs a hundred workmen, who are engaged in the manufacture of all that is necessary for the construction of the numerous works constantly in train upon some part or other of his extensive domain. From the windows of his mansion he views the chimneys of his steam-engine and factory smoking opposite to each other, not far from the last herds of deer which still bound over the lawns, but which are every day giving place to sheep.

In Northamptonshire, adjoining Bedford, rents, during the last sixty years, have tripled from the same causes. The Bedford family holds considerable property in this county; and Lord Spencer is another large proprietor, who, as an agriculturist, deserves equal celebrity with Mr Coke and the Duke Francis.

Of the ten counties which compose the eastern region, the three last, Cambridge, Huntingdon, and Lincoln, form a division by themselves—the fens. In looking at the map of England, we observe a large bay running into the land to the north of Norfolk, called the Wash. All round this muddy bay the land is flat, low, and constantly being covered by the sea. These marsh-lands, at one time uninhabitable, now rank among the richest mea-

dow land in England. Situated opposite to Holland, they have, like that country, been reclaimed by means of dykes. The area of these three counties is about 2,500,000 acres; of which the fens, properly speaking, occupy about a third, and are formed by the rivers Ouse, Nen, Cam, Witham, and Welland.

The draining, commenced by the Romans, was carried on during the middle ages by the monks who had established themselves on the islands rising here and there out of the inundated land. The English are slow in making mention of services rendered by the ancient monasteries; but it is nevertheless certain that in their island, as elsewhere, the only monuments of any value which remain from the most remote periods are due to the Catholic religion. Agriculture, in particular, owes its first success to the religious orders. At the time of the Reformation, the lands belonging to the monastic orders were bestowed upon powerful families, who have continued what the monks had begun. The residences of many of the nobility still retain the names of the abbeys which they have replaced—such as Woburn Abbey, Welbeck Abbey, &c. Before the monks were driven out, they had made pretty considerable progress in the reclamation of land; and, in addition to their canals and cultivation, the fine cathedrals of Peterborough and Ely remain to mark their passage. These churches still continue to be the leading features of that part of the country.

At the commencement of the seventeenth century, one of the Earls of Bedford put himself at the head of a company for continuing the works, to which a concession of one hundred thousand acres was granted. From that time the undertaking has gone on without interruption. Windmills and steam-engines, erected at great expense, are continually pumping off the water; these, with

immense ditches and indestructible dykes, are the means employed for effecting the object. The lands reclaimed are already intersected with roads and rail-roads; towns have been built, and farms laid out upon them. These once submerged and unproductive lands are let at a rent of 25s. to 30s. per acre. Cereal and root crops are occasionally to be seen; but the most part is in grass, upon which are fattened short-horned cattle, and sheep of a cross between the old Lincolnshire and the Dishley.

All the north of Cambridgeshire forms part of the fen district. The average rent there has doubled within the last forty years. Population has rapidly increased, owing either to the improved climate, or because the progress of draining has produced a demand for labour. The southern part of the county is not in such a satisfactory state; it more resembles Hertfordshire, of which it forms in a manner the continuation. Clay soils predominate, and consequently the crisis there was pretty severe; moreover, the inhabitants live in constant dread of fires. The farm buildings being all constructed of wood, and roofed with straw, a fire makes great havoc. The least discontent among the labouring population is shown in incendiary acts, the authors of which almost always escape the vigilance of the police. This evil appears also in other parts of England, but nowhere to such an extent as in Cambridgeshire. Assurance companies sometimes altogether refuse to insure steadings which have been burnt several times. The blaze of these fires reflects the bad condition of the labouring classes in those counties which are only agricultural: of these, Cambridgeshire is one; the poor there amount to a tenth of the population.

Between Cambridge and Bedford lies the small county

of Huntingdon, having an area of not quite two hundred and fifty thousand acres, and a population of only sixty thousand. Small though it be, it plays a great part in English history, as being the country of Cromwell. In an agricultural point of view, nothing recommends it specially to our attention.

If Norfolk has long held the first rank among the English counties for agricultural development, Lincolnshire, which a century ago was more waste and sterile, now disputes the palm. Lincolnshire contains about 1,800,000 acres, and may be divided into three very distinct agricultural districts: fens in the south and east, wolds or plains in the north, and moors in the west.

The fen district goes by the name of Holland, which, in fact, it much resembles. The advancing dykes, which gain more and more from the sea every day, are the same, the meadows are the same, and the flocks nearly similar; the appearance of the country, too, is the same, —low and wet. In some parts the high price of grain gave encouragement to the cultivation of cereals; but these now give way on all hands to grass, which is better suited to the soil. Rent there rises to an average of 30s. per acre. The wolds are dry and bare uplands, with a calcareous subsoil, which the four-course system has entirely transformed. They are let at an average of no less than 25s. per acre. The breeding of cattle is there carried on to some extent; and, excepting in winter, the animals have rarely any other feeding than that which the marsh ground usually attached to each wold farm supplies. The Norfolk rotation is there modified, inasmuch as the clover crop holds possession of the land two years, and wheat comes only once in five. But this modification, which had been adopted for the purpose of saving manual labour, has rather fallen into disfavour,

because it allows more time for weeds to root themselves in the land. That part of the county called Lincoln Heath was at one time perhaps even more barren than the wolds, but now the change there also is not less great.

Lincolnshire, like Norfolk, Bedford, and Northampton, owes the important changes which have taken place there to a wealthy proprietor—Lord Yarborough. Lord Yarborough's property extends to about thirty thousand acres, yielding a rental of £30,000, which, a century ago, brought in probably not a tenth of that sum. To give an idea of the state of this part of the country, now so populous and cultivated, it is said that near to Lincoln a tower or lighthouse was erected not more than a hundred years ago, for the purpose of guiding travellers who might lose their way at night in these desert moors.

Large farming, as well as large property, flourishes in the wolds of Lincolnshire. We find there farms of a thousand, fifteen hundred, and even two thousand five hundred acres. Such farms grow from two to five hundred acres of turnips, a like extent of barley or oats, as much clover, and an equal quantity of wheat. The farm buildings are kept in excellent order; and the farmers, who are almost all wealthy, live in a liberal style. Some of them have fine houses, numerous servants, and keep their hunters and superb harness-horses. Like Norfolk, it is the perfection of large property and large farming. I do not speak of one farm only, but of all. In the more naturally fertile parts of the county, again, one meets with middling-sized, and even small farming, which is rather remarkable, so close to the more brilliant model of the large.

CHAPTER XVI.

THE WESTERN COUNTIES.

If the southern region is the zone of cereals, and the east the chief domain of the four-course system, the characteristic of the west is grass, that primitive wealth of the English soil. The rural prosperity of this region is of old standing. At one time the entire agricultural wealth of the island was confined to two zones,—grass in the west and part of the central districts, and corn-lands in the south-east; the remainder was nothing but heaths, marshes, and uncultivated mountains. Later, however, these corn-lands have been surpassed by the light soils worked on the quadrennial rotation; but the grass-lands have maintained their old superiority. The rain which falls in the west of England is three times more than in the east; and some influence upon vegetation seems to be caused by the saline particles which the sea breezes from the west deposit on that side of the island. A similar effect is observable upon our western coasts. From time immemorial, whole counties there form but one immense prairie covered with flocks, and successive generations of cattle have continued to deposit an amount of manure, which still goes on increasing. These prairies, like the coal, are gifts of Providence. The whole rural economy of England owes its origin to them, for their existence has taught English farmers the importance of cattle. The

perfection of the art has been to imitate in other quarters what in the west has been so bountifully bestowed.

Nowadays, the grass country in its turn begins to lag behind; the very fact of its prolonged and easy success has sent it to sleep, while all around progresses. Agriculturists of the present day are not very favourable to what is called old grass; human art can do little for it, and where there is any great extent of it, agricultural science, so called, has made little advance. The grass-land farmers of the present day do just as their fathers did before them; the spur of necessity has not touched them, and modern improvements make their way among them with difficulty. The skilful stabulation of the Huxtables and Mechis, the art of drainage, the assiduous search after new manures, the ingenious invention of implements, the selection of seeds, all that feverish activity which characterises the new school, is to them unknown. The school of Arthur Young himself has not produced any thorough modification of their system. The two revolutions, which at the interval of half a century have agitated the agricultural world, have passed over almost without touching them. They rest upon their old superiority, obtained and preserved hitherto without exertion.

But will it be always so? This may reasonably be doubted; for not only does the improved system of agriculture produce, in general, a larger gross return, but in some parts it gives a greater net result. In the mean time, rents of grass-land are still, upon the whole, the highest. In the United Kingdom there are many millions of acres — probably one-fourth of the whole surface—in old grass. Nowhere else is found a like extent of lands giving such a revenue. In certain privileged parts of the north and south of France, in some

parts of Belgium, Italy, or Spain, higher rents may be shown, but only for small tracts.

The average of rents in England, as in France, amounts to about one-third of the gross production. This proportion, however, varies considerably, according to the mode of farming. In parts where expenses are high, rents fall to one-fourth, or even to one-fifth, of the gross return; but, on the other hand, where they are low, the rent constitutes one-half, and upwards. This is the case with grass-lands, for the amount of manual labour bestowed upon them amounts to scarcely anything; all that has to be done is in a manner to reap. The capital required is small, and the chances of loss small also; the whole is nearly sure profit. Thus we see rents given of as much as £8 per acre.

Grass-lands may be turned to account in three ways—namely, for breeding stock, fattening, and the production of milk. In England, as well as in France, it is found that breeding is the least profitable of the three. To this only the poorest pastures are devoted; and the same system of bringing young stock, bred in the mountain districts, to the more fertile country to be fattened, is adopted equally in England and in France. But new notions are opposed to these migrations of the cattle; and wherever such ideas find favour, fattening and breeding are combined, for the basis of the system consists in providing abundance of food during tender age. As yet, however, the plan is but very partially adopted; the general facts point at distinction in the occupations. Fattening is looked upon as the most lucrative and certain where the pastures are of a better kind; and, in fact, we know, from the experience of our Normandy graziers, how simple and advantageous this system is. But it is the milk which carries the day both in England and in

France. The graziers of the west make cheese, which, for the most part, is very much esteemed.

The western districts are among those which form an exception to the common rule in England, property and farming being there generally divided. For a few large estates to be met with, there are a great many small ones, some of which are worked by the proprietors themselves. We have already found this division in Kent, Sussex, and Devonshire; we shall meet with it again. The cause differs according to locality: in Kent, it is due to the diversity of the crops; in Sussex, it is owing to the stiffness of the soil; in Devonshire, the mountainous character of the country is the cause; while in the grass-lands the nature of the prevailing occupation prohibits its being carried on upon a large scale. English economists find that this division has been carried too far; and they are probably right, for the general condition of the population is not good, notwithstanding the high value of the produce, and wages are rather low.

The western region contains six counties. In that of Somerset, the portion which adjoins Devonshire is, like it, rugged and mountainous, and contains one of the most desolate and uncultivated districts in the island—the granitic moorland, called Exmoor Forest, rivalling Dartmoor in wildness: its extent is about twenty thousand acres, abandoned to a kind of half-wild sheep, and forming a refuge for the shyest kinds of game, such as deer. As a set-off to this, the vale of Taunton, bordering on Exmoor, is celebrated for its beauty and fertility; and all the country about Gloucester, near which is Bath, famous for its mineral waters, and the populous seaport of Bristol, abounds in excellent pasture. Nowhere in England, unless perhaps in Leicestershire, and always excepting Middlesex, are rents so high as in Somersetshire; the

average is 30s., and it rises to double, and even treble in the Vale.

A country uniting so many advantages, so near to London, and with such outlets as Bath and Bristol for its produce, favoured besides by nature with that beautiful grass vegetation which produces such high rents, might be supposed to be in a very flourishing condition. The working classes suffer, however, and the manifest cause of it is over-population. It is just this over-population which, by provoking an undue competition for the farms, has caused at once high rents and the too great division of land. Since 1801, the population of Somerset has risen from 280,000 to 444,000, while the land has not proportionately increased in richness; the balance being thus destroyed, a remedy can only be effected by an increased production of the land, or a reduction in population.

Gloucestershire, which adjoins Somerset, divides itself into two parts—what are called the Cotswolds, or high grounds, and the Vale, or valleys of the Severn and Avon. These two agricultural districts require to be considered separately.

The Cotswolds form a series of table-lands from five hundred to six hundred feet above the level of the sea, intersected with shallow valleys. The character of the soil is poor, and the climate cold. At one time they were almost entirely devoted to sheep pastures, but cultivation has gradually extended itself over this naturally unproductive soil, and by means of the Norfolk rotation, and the purchase of extra manure, remarkable results have been obtained. The average rent now reaches 16s. per acre. The farms are extensive, and farmers in general well off. Paring and burning is much practised, and is better understood than in France. In place

of sowing corn for the first crop, they begin with turnips, and these are eaten off by sheep; then comes barley with grass seeds; the third year clover, and the fourth wheat. The chief stock of the Cotswolds is sheep. The old breed of the county—become, by modern improvements, one of the best in England—rivals the Dishley and Southdowns. Upon the whole, the agriculture of the Cotswolds may be held up as a model for light and poor soils.

The Agricultural College of Cirencester is situated in the Cotswolds. It was built by subscription upon property belonging to Lord Bathurst, and rented specially for the purpose. The first men in the county are members of this large establishment, which in many respects resembles our Institution of National Agriculture. Like ours, it had obstacles and difficulties to contend with, such as all young institutions encounter; but English perseverance is not so easily put down, and it is now in a flourishing condition.

In this neighbourhood resided Lord Ducie, one of the large landed proprietors of England interested in agricultural improvements. After the death of this skilful agriculturist, a sale of his stock took place on the 24th of August last year, at which was witnessed one of those sights to be seen only in England. Nearly three thousand amateurs assembled at Tortworth Court farm, where sixty-two head of short-horned cattle realised the sum of £9371, or 234,000 francs, equal to an average of £159 each. One cow alone, three years old, with her calf of six months, brought 1010 guineas;—it is true, she was a descendant of Charles Collings' celebrated "Duchess."

The Vale of Gloucester has been endowed by nature differently from the Cotswolds; but human industry has done less for it. The average of rents there reaches 29s.

per acre. The land is almost entirely under grass, and it holds an ancient and deserved reputation for its cheeses. Notwithstanding these advantages, it is admitted that the system of agriculture might be improved, and the production easily increased. Draining is little resorted to, and the use of supplementary manures is not very common. This backwardness is usually attributed to the too great division of property and farming. The crisis, which in general did not affect grass districts, was severely felt in the Vale of Gloucester. The general fall in prices affected cheese as well. The small farmers, already poor, and reduced by competition to the bare necessaries of life, were unable to stand such a fall. Proprietors, on the other hand, needing all their incomes, found it difficult to lower their rents, or to make advances for improvements in order to increase production. Such is the unfortunate involvement of affairs, from which, however, escape must be found.

Under this accidental poverty lies a large amount of real wealth, for the gross produce is still there. No actual distress meets the eye. One seldom sees a more charming country than those refreshing valleys of the Severn and Avon, with their ever-green verdure, their luxuriant hedgerows, and thousands of grazing cattle. It seems as if comfort and happiness should never fail in such a country.

Among the six western counties, three form the grass district, the other three belong to the mountainous region which separates England from Wales. The small county of Monmouth, the most southerly of the three, situated between the sea and the mountains, presents the greatest variety of aspects: towards the west and north, we have the rugged wildness of the Alps; while the east and south, bordering on the Wye, is a perfect garden. Culti-

vation by oxen is still sometimes to be seen there, but this is becoming more rare in England every day. On the coast, rents rise very high, and fall in proportion as they near the mountains. Although the population is greater than the natural resources of the country might lead one to suppose, still they are throughout in a flourishing condition, a considerable amount of labour being absorbed by the coal and iron mines.

Herefordshire exhibits fewer contrasts than Monmouth; it has less of mountain and plain, but the county generally is hilly. The average rent is somewhat higher than in Monmouth. As to Salop, the last and largest of the three frontier counties, one part of it is just a continuation of Hereford, the other is a transition between the hilly country and the more flat county of Chester; its numerous iron-mines and potteries rival those in the neighbouring county of Stafford.

The chief agricultural occupation of this district is the breeding of that fine race of white-faced red cattle known by the name of Herefords. These cattle, which the graziers of the midland counties, who purchase them for fattening, esteem most highly, fatten more readily than any other breed when put upon good pasture; and their beef is better than the Durham, but slower in forming. If, as appears to be the case, the breeding of short-horns is increasing in parts of the country where they have not hitherto been reared, the most profitable occupation of the Welsh frontier will be threatened, and the Herefordshire breeders will also be forced to turn their attention to fattening.

Lastly comes the county of Chester, the richest of the six. Cheshire cheese has a fame out of England wider even than that of Gloucester. The county contains seven hundred thousand acres, one-half of which is under

grass. The number of milch cows it maintains is above one hundred thousand, each of which gives from two hundred to four hundred pounds of cheese, and fifteen to twenty pounds of butter. The rent of grass-land exceeds in general 30s.; but as arable land is lower, the general average of the county is 26s. to 28s., the farmer paying tithes and taxes. Property is less divided than in Gloucester and Somerset, but farming is quite as much so. There are scarcely more than one or two farms of four hundred acres, the majority being not more than seventy, and a large number in the cheese districts are under twelve.

This agricultural condition is not attended with the same inconvenience here as it is in Gloucester and Somerset, either because there is not a corresponding division of property, or more probably owing to the neighbourhood of the manufacturing districts, which offer immense outlets. A labourer's average wage is 12s. per week, or 2s. per working day. Drainage is general, and the use of supplementary manures frequent.

This ancient and prosperous rural economy has not prevented the spirit of innovation from finding its way into Cheshire. Mr Littledale's farm on the Mersey, opposite to Liverpool, is already famous for its admirable stabulation. The cows on this farm never go out, which appears monstrous to the graziers in the neighbourhood: in summer they are fed on clover, Italian rye-grass, and green vetches; in winter, on corn, chopped hay, turnips, and beetroot. It is asserted that by this means eighty-three milch cows and fifteen working horses are easily kept upon eighty acres.

The Marquess of Westminster, a very extensive proprietor, and whose magnificent residence is the ornament of the county, is a great encourager of draining; he has

tile-works, which make a million of drain-tiles in the year, and these he gives gratuitously to his farmers.

The most successful manure for these grass-lands is bone-dust. Farmers willingly pay the proprietors seven per cent of the expense for laying this powerful manure upon the soil; upon every four acres it gives them, they say, sufficient extra food for an additional cow. Agricultural chemistry explains perfectly how this wonderful effect is produced. The phosphates are taken out of the soil by the constant carrying away of the milk, and require to be renewed. One to two tons of ground bones are used to the acre, the effect of which is immediate, and lasts from fifteen to twenty years. These bones come from Manchester, where they have already undergone a process which deprives them of their gelatine for glue. Thus, industry and agriculture render each other mutual assistance, and the third sister, science, brings them near, and unites them—modern divinities, which go hand in hand, like the ancient sisters. We obtain like results with animal charcoal after it has been used in the sugar-refineries.

The Cheshire cheeses weigh from fifty to one hundred pounds each; the largest are considered the best: some smaller are made in the shape of pine-apples, but they are not so much appreciated. It takes about four quarts of milk to produce one pound of cheese. The red colour, which distinguishes them, is produced with *annotto*, and they are sometimes kept as much as three years before being sold for consumption. The cooler for the milk, the salting-tub, the large and powerful presses, the store filled with these huge shapes, the well-kept utensils of wood and iron,—everything in these dairies wears an air of comfort. The city of Chester, which is one of the most curious towns in England, from the singularity of its construction, carries on a considerable annual trade in cheeses.

Among the productions of rural industry, this, in my opinion, is one of the most interesting; besides furnishing the mass of the population in all countries with a wholesome, palatable, and nourishing food, easily carried and easily procured, cut in any quantity which may be needed, and requiring no preparation, I cannot forget that it was the manufacture of cheese which enabled Holland and Switzerland, two of the noblest nations of modern Europe, to establish their independence. There is more connection than is generally supposed between a nation's political history and its rural economy. This industry passed into England from Holland, along with turnip cultivation, and the latter of these gifts is worth nearly as much as the other.

The trade in cheese appears likely to be greatly extended in the present day. In the producing countries, especially in Holland, the rise in price shows the increased demand; wherever the condition of the labourer improves, the first addition he makes to his piece of bread is a morsel of cheese. The European colonies in the New World offer, besides, an almost unlimited market, and it is principally for these new colonies that the Dutch cheeses are purchased. France also makes excellent cheeses, but not as yet in sufficient quantity, especially for exportation. Nothing, however, is more simple than to imitate the most esteemed qualities of Dutch, Swiss, and English cheeses; it only requires a little attention and a certain amount of capital. France, besides, has certain kinds of her own which compare advantageously with the best of the foreign kinds; among others, for example, is the ewe-milk cheese of the Roquefort mountains, which has nothing analogous in Europe, and which may become one of our most valuable sources of wealth, as it is already one of the oldest.

CHAPTER XVII.

THE MIDLAND COUNTIES.

PURSUING our tour of agricultural inspection through England, we arrive at the central districts. The first counties west of London are Buckingham, Berks, and Oxford, none of which present any remarkable feature, nor is their agricultural condition either above or below the average.

Buckinghamshire has an area of four hundred and seventy thousand acres, with a population of only one hundred and sixty thousand, which, in England, indicates a country exclusively agricultural. The division of the land among the various crops is about equal, and this is the case also in respect to the farms, which are of all sizes—large, small, and middling: the extent of hill and level country is about the same, and strong and light soils divide the county between them. The valley of Aylesbury is reckoned one of the most fertile in the kingdom. The farms there are larger, and rents double what they are in the rest of the county. Its pastures are devoted to the fattening of sheep and of oxen, and the feeding of milch cows, in the proportion of about one-third to each of these kinds of stock. A particularly fine kind of white duck is bred by the small farmers about Aylesbury; these, and John Hampden's name, are the pride of Buckinghamshire.

Berkshire adjoins Surrey higher up the Thames. In the east its soil is of the same sandy and poor description as in Surrey and Hants. In this quarter are Windsor Forest and tracts of uncultivated heath ; the rest is composed of calcareous hills or downs, of the same nature as those of Sussex and Dorset, and a valley famed for its fertility, called the *White Horse Vale*, from the fact of one of the chalk hills in it having been cut in the form of a horse. The chief occupation in this valley is the making of cheese, which is sold under the name of Gloucester. The chalk hills pasture sheep similar to the southdowns, and natives of the same kind of country. The fattening of pigs is carried on to a great extent about Farringdon, the Berkshire breed being one of the best in England. We here find few large farms, but a great number of small ; a few yeomen even remain, who cultivate their own land.

The most celebrated farm in Berkshire is that of Mr Pusey, the present President of the Royal Agricultural Society of England. This farm contains about three hundred and seventy acres. All branches of farming there are equally well managed ; but what is particularly worthy of admiration, is the breeding and fattening of sheep. The flock consists of eight hundred head, one-half of which is composed of breeding ewes. In winter they are fed with roots, and during summer upon irrigated meadows. These meadows are the most striking feature in Mr Pusey's farming. Mr Pusey engaged an experienced irrigator from Devonshire, and laid out about £5, 10s. per acre upon the work. The production of these meadows appears to be enormous, as Mr Pusey professes to feed, during the five summer months, seventy-three fine southdowns upon two acres. These sheep are put upon the meadows in pens, and as the grass is eaten

down the pens are shifted; before putting the sheep on the water is stopped off, and let on again when they are removed. Mr Pusey asserts that, fed in this way, and finished off upon corn and oilcake in sheds, they are fattened at a year old, and sold at a high price for the butcher. Notwithstanding these great results, and those which he obtains in other branches of his farming, the general opinion is that Mr Pusey does not realise any profit; however, he not the less does good service to agriculture. It is acknowledged by all that he has succeeded in fattening four times the number of sheep, and doubling the produce of cereals upon his farm: this will lead others to attempt like results by more economical means, and probably with success.

The average rent of Oxfordshire is the same as in Bucks and Berks, and it presents similar fluctuations, according to the nature of the district. Perhaps in no other part of Great Britain is such diversity of soil to be found. The rent of light soils is, on an average, as high as 30s. per acre; but the Oxford clay being quite as stiff as the London basin, clay soils scarcely reach 8s. The old three-year course is still followed up on these clay lands—namely, wheat, oats, fallow. Upon the light soils it is the Norfolk rotation, which is, as usual, successful.

The worst part of the county is the west. Here, among other large properties, is Blenheim, belonging to the Duke of Marlborough. This estate, presented by the nation to the conqueror of Louis XIV., is justly reckoned one of the finest places in England. The park alone contains upwards of twenty-five hundred acres, and the remainder of the property is considerably more. During the last crisis, almost all the tenants threw up their farms, because the Duke refused to make any concessions, and he was therefore obliged to employ agents to carry on the

farming upon his own account. The Duke's conduct was severely censured in England, where public opinion requires landlords to be very lenient towards their tenants. It is more than probable, too, that the experiment has not, in a pecuniary point of view, succeeded. All along the Thames and other rivers there are excellent meadows, which furnish the means for supplying butter to the London market. Between Oxford and Buckingham rises another ridge of calcareous hills or downs, called the Chiltern Hills.

Upon the whole, whoever wishes to see an epitome of the agriculture and soil of England should visit Oxford and the counties adjoining it. Other attractions than these, however, take the traveller to this part of the country. Oxford is one of the most interesting towns in the three kingdoms, and Blenheim, with its magnificent collection of paintings, is also deserving of a visit. The county affords an example of every kind of crop, every sort of land, all grades of rent, and every method of cultivation, and the average of the whole agrees with the general average. We may add that Oxford is now only a few hours by rail from London. Manufacturing and commercial England alone are unrepresented there, the vicinity of London and Bristol supplying only imperfectly their absence.

Wiltshire is divided into two very distinct parts, north and south. These two districts differ as well in agricultural productions as in geological formation. The northern portion, consisting of verdant valleys, through which flow the tributaries of the Avon, is a country of grass and dairies. The southern, composed of extensive calcareous downs like Dorset, is a region of cereals and sheep: here we have the famous Salisbury Plain, containing the Druidical remains of Stonehenge. In the north rents rise

to 30s. and upwards, and fall to 15s. in the south. In the north the farms upon the whole are small, say from fifty to two hundred and fifty acres; but in the south they are immense—some of two thousand and three thousand acres, but mostly about one thousand. The small farmers in the north are, generally speaking, men of no capital, cultivating the land with their own hands, with the aid of their families. In the south they are, for the most part, wealthy men of enterprise; and yet the crisis did not affect the prosperity of the north, while the southern part of the county was one of the districts where it was most felt.

The reason of this is, that cereals were too extensively cultivated there. Salisbury Plain presents to the eye the appearance of a deserted country, where a few farms, at great distances from each other, are hid from view in hollows, and where fields of corn, without a tree or fence, extend as far as the eye can reach. These immense tracts were formerly used only for sheep-pastures, but the high price of corn caused them gradually to be converted into arable land; and this transformation, although profitable at first, was not in every case judicious. Ricardo had them in view, when he says that it is the good land that is first cultivated for corn, then the middling, and finally the bad, and that, the demand increasing always with the population, it is the most expensively raised article which regulates the price of the market. This axiom, however true at the time, and in the country where it was propounded, has since been disproved in more than one instance. England is about to show the reverse by abandoning the cultivation of cereals upon bad and middling land successively, and this south Wiltshire can vouch for. To produce at the dearest rate, even when an accidental state of the market admits of its paying, is a wrong

principle in rural as well as in industrial economy ; the more prudent plan is not to venture upon it.

It would appear that an excessive and mistaken application of large farming has been practised in this part of the country. Large farming is beneficial when it reduces the expenses of production, but is useless when it increases them. There is a limit to everything. The Weald of Sussex and South Wiltshire are the two parts of England which suffer the most ; in the one the cause of the evil is the smallness of the farms, and in the latter it is because they are too large. The best system is universally that which, in any given situation, pays at once the best rent, the best profit, and the best wages. Now this is not what Wiltshire does at present with its immoderately-sized farms, for proprietors, farmers, and labourers all complain. In no part of England are wages lower and poverty more rife. It is evident that one of the first remedies is to divide these large farms, for they require too great a capital ; and in the second place, probably a reduction in the breadth of corn, and adoption of a system more suited to the nature of the soil.

We observe quite another state of things in the midland counties, properly so called—Warwick, Worcester, Rutland, Leicester, and Stafford. Situated between the grass country of the west and the four-course system of the east, this district presents a happy association of both systems ; it is the richest farming district in England.

Beginning with Warwick, we at once see the chief cause of this great rural prosperity. Hitherto we have had under our observation only those parts of the country exclusively agricultural, or at least little industrial, where outlets abound, no doubt, to a greater extent than in three-fourths of our France, owing to the proximity of

London, and the numerous ports upon the coasts, but where the great stimulus of manufactures is almost entirely wanting. In entering Warwickshire we come into a manufacturing district; and Birmingham, with its dependencies, first presents itself. During the last fifty years the population of the county has more than doubled; at present it is little short of one per acre. Four-fifths of this population are manufacturing, from whence it follows that an acre is required to produce food sufficient for one person, and that a farmer who brings his produce to market finds four consumers to bid for it; and these consumers, all in the receipt of high wages, have the wherewithal to pay good prices for their purchases. How is it possible that agriculture should not prosper under such circumstances?

It must not be supposed that the soil of Warwickshire is good throughout. All the northern part of the county was at one time an immense moor, covered with wood and heather; now half the land is under grass, the remainder being arable, and, as far as practicable, cultivated upon the Norfolk system. Only one-fourth of the soil produces cereals for human consumption, and the fertility of this fourth, as well as of the rest of the land, is continually increasing, not only from the manure derived from an immense number of cattle, but by additional manure obtained in the manufacturing towns, and transported at a moderate cost by the canals and railways which traverse the country. But it must not be supposed that the system of large farming is that which prevails in Warwickshire and in the other manufacturing counties: the average of the farms is one hundred and fifty acres, and the majority are under this size. Nor is it long leases which have much influence on the progress of agriculture, for in general the farms are held

from year to year. Nevertheless the farmers go to considerable expense for improvements ; and although rents have doubled since 1770, they do not complain of their landlords. When both are making profit, everything goes on smoothly. Wages in their turn participate in this prosperity, the rate being on an average 20d. per working day.

A Warwickshire farmer commonly cultivates one hundred and fifty acres, for which he pays a rent of £240, besides taxes, which amount to £60 ; he gives good wages, and, without much care or trouble, makes an income of £120. Of course, he is not such a great man as the wealthy Norfolk or Lincolnshire farmer ; but in the eyes of us Frenchmen, who prefer moderate riches, such a condition is more satisfactory, inasmuch as it provides for a larger number more equally. The land, in the aggregate, is more productive ; both the gross and net produce are higher, and a denser population enjoys at least an equal amount of moderate comfort. A tour through this smiling county is very pleasant. Kenilworth and Warwick, with their historical associations, and the delightful banks of the Avon, are additional attractions to such an excursion, which may be crowned by the wide field of interest afforded by the manufactures of Birmingham ; and that nothing may be wanting, the shade of the great Shakespeare attends you through this, his native county.

In the present state of our fields, there is probably no part of France which will bear comparison with Warwickshire : we have nothing nearly so well dressed by the hand of man. The English are acquainted, moreover, with all the good things they possess, while we do not know ours. There is no English landscape fresher or more fertile than the rest which is not immediately known to

all, at least by name. With us, on the contrary, what numbers of smiling valleys, fertile plains, and beautiful hills display their unknown beauties to the sun without a single curious eye to visit them! Our neighbours are justly proud of the magnificent mansions they can show; in this respect, however, we are not so much inferior to them as people suppose: our fields have not always been so deserted by the wealthy families as during the last hundred years; and previously to 1789 we were fully as rich as the English in fine country residences. After all the demolitions, effected as much by revolutionary fury as by a barbarous speculation, we could still show a tolerable number of chateaus of the last three centuries to oppose to the most celebrated English mansions; only, while ours are in a state of ruin, theirs, preserved with religious care, and enlarged every generation, respected by all as national heirlooms, remain in good repair. Even their ruins, when these are to be met with, which is not often, are kept with care. They even go so far as to build imitations of them when they have not got them, and the taste for what is called the Tudor, or pointed and turreted style of architecture, is carried to a ridiculous extent.

What I have remarked in respect to Warwickshire applies equally to the neighbouring counties of Worcester and Leicester. The valley of the Avon runs into Worcestershire, carrying along with it the same beauty and fruitfulness. Leicestershire, perhaps, is even richer still. Grass husbandry succeeds well on lands situated upon the lias, and there is a great deal of such land in Leicestershire. The small town of Melton Mowbray, which is greatly resorted to in the hunting season, owes its popularity to the nature of the country; the ground is slightly undulating, with full and sluggish rivers wind-

ing through rich pastures intersected with hedges, making it peculiarly favourable for this sport. The county is famous for its Stilton cheese, and for the farm of Dishley Grange, once occupied by Bakewell, from whence emanated the great principle of the transformation in breeds of domestic animals, one of the most valuable conquests of human genius.

Notwithstanding its traditional prosperity, Leicestershire did not altogether escape the effects of the crisis. Like most grass countries, its very success had sent it to sleep, and, as is generally the case with such countries, it had permitted too great an invasion of small proprietorship and farming. When the fall came, both small proprietors and small farmers found themselves in difficulties. Some changes among the occupants became necessary, and these very soon took place. The small county of Rutland, containing only ninety-five thousand acres, is very similar to Leicestershire.

Staffordshire affords probably the most striking example in England, with Lancashire, of the influence which the vicinity of manufactures exercises on agriculture. The mountains which run through it, naturally barren and wild, rise to a thousand feet and more above the level of the sea. The manufacturing districts are situated exactly in the least fertile parts, and are divided into two classes: the potteries in the north, towards Lancashire, and the iron works in the south, extending all the way to Birmingham. Owing to the extraordinary progress which these manufactures are making every day, the population of the county exceeds six hundred thousand, upon an area of seven hundred and thirty thousand acres. With such a mass of population the land must be stubborn indeed which cannot be forced to produce. The annual produce of the potteries alone is estimated

by English statistics at two millions sterling, and the iron-founderies produce six hundred thousand tons annually. All this wealth reacts upon agriculture.

Large property predominates in Staffordshire, as is the case in all countries not naturally fertile. The Duke of Sutherland, descendant of the lords of Stafford, the Earl of Litchfield, Lords Willoughby, Talbot, and Hatherton, the Marquess of Anglesea, and Sir Robert Peel, are the largest proprietors in the county. Generally speaking, the farms are let from year to year, and this is preferred by the farmers—a proof of the good understanding existing between landlord and tenant. The effects of the crisis here have quite passed away : the landlords at the time had to make but trifling concessions, for the farms in general were let at moderate rents, and the tenants sufficiently well off to stand a temporary reduction of profits. Wages are 20d. per working day, and the poor-rate—the infallible sign of the condition of the working classes—is not at all high. It frequently happens that there is not a single pauper on the estates of Lord Hatherton. For the whole county, the average of poor is only four per cent of the population, whilst in Wiltshire it amounts to sixteen per cent. It is the Norfolk rotation, again, which causes this prosperity. Wherever this system coexists with large property and manufactures, English agriculture reaches its climax. Staffordshire partakes of the advantages arising from irrigation, which has transformed the sterile slopes of the hills into excellent grass-lands.

The principal farms in the county are those of Lord Hatherton, at Teddesley, containing seventeen hundred acres ; the Duke of Sutherland's, at Trentham ; and Drayton Manor, the residence of Sir Robert Peel. It is

curious to witness how Sir Robert Peel, himself a large proprietor, settled, in his own concerns, the question he so boldly brought forward upon public grounds. Every one may remember the letter which he wrote to his tenants on 24th December 1849. The views he then stated have been fulfilled. Sir Robert caused all his lands to be drained at his own expense, under the direction of Mr Parkes, upon condition that his tenants paid him four per cent on the outlay. These terms they accepted. All their rents were revised, but few reduced, as in general they were moderate enough; and it is sufficient to state that the farmers to whom leases were offered refused them. They preferred yearly tenancy, upon which terms their farms had been held by their families for generations.

The estates of Sir Robert Peel are a model of good management. The excellent state of the buildings, the goodness of the roads, the levellings and drainage, the construction of good cottages with gardens for the labourers —all bespeak the wealth and liberality of the master. The farmers, on their part, having the utmost confidence in their landlord, do not hesitate to lay out money on the land, which yields them an excellent return. Everywhere the most improved implements, the choicest seeds, the most productive methods; everywhere also the best crops and the best cattle: even the day-labourers work with additional energy, confident that a sort of providence anticipates their wants. Here, as at the Duke of Bedford's, the Duke of Portland's, and Lord Hatherton's, may be seen the ideal of the large proprietor of England, who considers himself as having at least as many duties as rights, and who employs advantageously for his dependants, as well as for the good of the land, which

brings forth fruit under his hands for the greater good of the community, that fortune, which in a manner is only intrusted to his care.

To the north of the green plains of Leicester the mountains which compose the two counties of Nottingham and Derby take their rise. Properly speaking, the mountainous district is confined to Derbyshire, Nottinghamshire being rather what may be called a hilly country, though partaking of the character of the Derbyshire mountains. In former times Sherwood Forest, made famous by the exploits of Robin Hood, covered the greater part of these hills. The forest has now disappeared before the progress of the plough, but the sterility of the soil still remains. By a good fortune peculiar to England, the very barrenness of the old forest has proved advantageous in one respect: it has continued in the possession of a few noblemen, who, for their own enjoyment, have laid it out in fine parks and extensive estates. The district goes by the name of the *Dukery*, because the number of ducal residences it contains is greater than in any other part of England. The Dukes of Newcastle and Portland, and Earls Manvers and Scarborough, have all splendid residences there. In a remote corner of the forest, not far from the oaks still shown as those which afforded protection to Robin Hood, stands the half-ruined Abbey of Newstead, the scene of Lord Byron's boyhood. Any one who has visited this secluded spot can better understand how, amid ruins haunted by the spirits of the dispossessed monks, and the silent woods conjuring up stories of bold outlaws, that melancholy genius which sprung out of it was formed.

The Duke of Portland, the largest proprietor in this part of England, is also one of the greatest agriculturists in the country. During his long and honourable career

(for he is now upwards of eighty), the Duke has unceasingly employed the influence of his name and wealth for the improvement of agriculture. Through his instrumentality the environs of the small town of Mansfield have been quite regenerated; in place of the moors which once covered them, a rich cultivation now exists. The most striking work of the Duke's is an extensive system of irrigation close to Mansfield, effected by means of a small stream, diverted so as to form a wide canal which waters four hundred acres. This undertaking cost £40,000, and the gross return is estimated at £10 or £11 per acre. These meadows yield two hay crops annually, and during the rest of the year they afford good pasture for southdown sheep. Nothing gives more the idea of power than Clipstone farm, to which these irrigated lands belong, and which contains altogether not less than two thousand five hundred acres. The immense paved court, where a herd of Scotch cattle of the Angus breed is kept in the open air the whole year amidst ricks of hay, is a magnificent and striking sight.

The properties of the Dukes of Newcastle and Portland are also distinguished by another kind of cultivation—namely, nurseries and plantations of all kinds of trees. I have already mentioned that some noblemen had set about planting regular forests in parts where the attempt to improve the land had not been attended with success. By this it will be ascertained how far these forests, sown and planted by man, composed of selected plants, freed from all parasitical vegetation, carefully thinned, and, in fact, cultivated with every care, will be found superior to those natural forests which have grown up of themselves.

Owing to these well-directed efforts, the inferior lands of Nottinghamshire have reached an average rent of 26s.

It is true that the no less beneficial influence of manufactures has to be added to that produced by large property in the hands of men devoted to the public good. The town of Nottingham, with its suburbs, has a population of about one hundred thousand, and is the seat of numerous manufactures. The population of the county has doubled within the last fifty years, and during the same period rents have tripled. These two facts are everywhere observable, the last being a result of the former. The Trent valley, the natural fertility of which forms an exception to the rest of the county, is of extraordinary richness.

Derbyshire, one of the most picturesque counties in England, is visited by crowds during the summer. The charming village of Matlock is the headquarters of tourists. It is famous for its mineral waters, and its situation reminds one of the prettiest valleys in the Pyrenees. From this quarter are made all kinds of excursions, sometimes to the tops of the neighbouring mountains or into the deep dales; but the most interesting is that to Chatsworth, the magnificent residence of the Duke of Devonshire. The roads through his immense park are, with great liberality, thrown open to all, and used as freely as the Queen's highway. These large properties are not altogether profit; for, however wealthy may be the proprietor, the keeping up of that beautiful palace, with its gardens and magnificent park, all which the public enjoy more than the owner himself, is attended with great expense. The saying, *Noblesse oblige*, applies to the English more than to any other people. In England, titles and wealth command great respect, but the necessity of keeping them up sometimes ends in ruining the possessors. One can foresee that a time will come when no private fortune will be able to stand the expense

of keeping up Chatsworth ; and then the consequence will be, that this Versailles of England will either disappear altogether, or it will become national property, which it is, in fact, already, considering the use that is made of it.

The Duke of Devonshire is, besides, proprietor of a large part of the county. The Duke of Rutland has also extensive property there, a part of which consists of the High Peak mountains, separating Derbyshire from Yorkshire, and which form the dorsal fin of England. Cultivation, of course, is completely checked upon these high lands, which are covered with barren moors as far as the eye can reach; but these waste grounds subserve another object of luxury ; they are enclosed with walls to the extent of many square leagues, and stocked with all kinds of game.

The lower mountains, of which three-fourths of the county consist, are covered with pasture. Wheat there thrives badly ; the only cereal which succeeds is oats. It is a rearing country, as such countries generally are ; there are bred short-horned cattle and Dishley sheep, which are sold to the low-country farmers : cheese is made to a considerable extent, which, without having the reputation of that produced in the rich valleys of the west, meets a ready market. This county much resembles the mountainous districts in the middle of France, as Auvergne and Limousin, both in appearance and in the occupation of its inhabitants. Unfortunately, if the means employed be the same, the results are widely different; for while rents in the middle of France scarcely reach 5s. per acre, they are on an average nearly 20s. on the Derbyshire hills ; but it must also be added, that while our central departments have no outlets for their produce, roads and railways run through Derbyshire in all directions. Locomotives are to be seen dashing along the sides of steep

rocks which one would have thought goats only could have reached. The working of the mineral wealth of the county encourages this movement.

Though Derbyshire is a country of large property, the farms are principally of middling and small size. The Duke of Rutland's estates, in particular, are laid out in small farms. Altogether this high land, naturally so unproductive, is one of the most prosperous parts of England. Manufactures and agriculture are there equally balanced. To these two sources of wealth, that expenditure which the ducal residences involves has to be added, and also the money spent by tourists and those who attend the baths at Matlock. We find here large property and small farming harmoniously combined; both have their advantages; the first moderates rents and increases useful expenditure, while the second secures a larger gross production. The population of the county is large, numbering nearly one for every two acres, and no class appears to be ill off; not even since the fall in prices. The average rate of wages, that criterion of prosperity, is 2s. per day.

CHAPTER XVIII.

THE NORTHERN COUNTIES.

THE northern region, the last to come under our notice before quitting England proper, commences with Lancashire and the West Riding of Yorkshire. Here everything is on a large scale. Lancashire has an area of 1,200,000 acres, and a population of upwards of 2,000,000, which is nearly two per acre! The southern part of the county is the chief seat of manufactures, and the most densely peopled; the seaport town of Liverpool, and the manufacturing city of Manchester, cover it with their ramifications.

If this is the most productive district in the world, it is also the dullest. Let any one fancy an immense morass, shut in between the sea on one side and mountains on the other; stiff clay land, with an impervious subsoil everywhere hostile to farming; add to this a most gloomy climate, continual rain, a constant cold sea-wind, besides a thick smoke, shutting out what little light penetrates the foggy atmosphere; and, lastly, the ground, the inhabitants, and their dwellings completely covered with a coating of black dust—fancy all this, and some idea may be formed of this strange county, where the air and the earth seem only one mixture of coal and water! Such, however, is the influence upon production of an inexhaustible outlet, that these fields, so gloomy and forsaken,

are rented at an average of 30s.; and in the immediate environs of Liverpool and Manchester arable land lets as high as £4 per acre. There are not many soils in the most sun-favoured lands which can boast such rents. At the sight of such wonders one is almost tempted, with the Latin poet, to exclaim, "Hail, Saturnian land, the fruitful mother of harvests and of men!"

> "Salve, magna parens frugum, saturnia tellus,
> Magna virûm!"

At one time Lancashire was a country of large property and large farming; the same condition of property still remains, but farming has become more divided with the increase of population. And still, in the midst of this dense population, there is room for a number of noblemen's parks: such are Knowsley, belonging to Lord Derby; Croxteth, to Lord Sefton; Childwall Abbey, to the Marquess of Salisbury, &c. These parks take away large tracts from farming, properly so called, and begin to excite murmurs among the Manchester school. An association has been formed, under the auspices of the celebrated Cobden, for the purpose of purchasing large properties, and cutting them up into small lots. This society numbers many thousand adherents, and a very large amount of subscriptions.

This populous district is the seat of democratic and *bourgeois* opinions—I might almost say of a revolutionary spirit, if such an expression were compatible with the moderation always maintained by the English in their most violent agitations. They there talk in the most unceremonious way of the necessity for a change in property as well as in political influence: if such language were held on the Continent, it would most certainly indicate approaching disorders. Fortunately, the English are well aware that it is better to be patient, and progress

gradually. Meantime, large property remains mistress of the land, and has hitherto been wonderfully benefited by the manufacturing activity which prevails around it.

The Lancashire proprietors have less reason than any to complain of the effect which low prices may have upon rents. It is true that Manchester and Liverpool promulgated the opinions which ended in Free Trade; but before agitating a possible reduction in the income derivable from landed property, the vicinity of these indefatigable workshops had already increased it considerably. Even supposing a reduction of ten or twenty per cent to have taken place, the Lancashire proprietors would still be gainers. The late Premier, Lord Derby —he who at one time appeared likely to revoke the measure of 1846, but who ended by confirming it—is, in fact, the largest proprietor in Lancashire, where his ancestral name is still cherished. Before yielding, as minister, to the force of public opinion, he had made up his mind as a proprietor. He succeeded in averting any reduction in his rents, by using the great antidote, that universal remedy—drainage. A body of nearly one hundred labourers, under a special agent, has been employed to drain his lands. The farmers are required simply to cart the draining-tiles; and upon completion of the work, pay, in addition to their rents, five per cent on the outlay. Such is the effect of draining upon these clay lands, and under that damp climate, that every one profits by it; even Lord Derby himself has benefited *malgré lui*.

In a report upon the agriculture of Lancashire, a farm of 155 acres is mentioned, where the yearly quantity of extra manure purchased is two thousand tons. Such manurings ought certainly to produce good harvests. Roots and potatoes, especially, give remarkable results. In some parts, two crops of potatoes are obtained in the

year; upon others, Swedish turnips give forty tons per acre. The manure employed costs 5s. to 6s. per ton.

The plan adopted for bringing the moss-land into cultivation is worth describing. First of all, deep trenches are cut at a distance of thirty feet apart, in which the tiles are placed; after that, vegetation on the surface is burnt, and the ground broken up by several cross-ploughings. When the whole is well pulverised, marl is carried by means of a movable railway, and spread over the land at the rate of 100 to 150 tons per acre. During this operation, it frequently happens that the ground is so soft that it is necessary to put planks under the feet of both men and horses, to prevent their sinking. The land then receives a manuring of nightsoil and cinders, and is planted with potatoes; after this crop, which is usually a good one, the Norfolk rotation follows. The whole—draining, marling, making roads, and building farm-offices—costs £10 to £12 per acre. In this way many thousands of acres have been reclaimed, and among them a portion of Chat Moss, between Liverpool and Manchester.

In the south of Lancashire the average wage is 13s. per week. This is the highest which has hitherto come under our notice. The practice generally, in regard to leases, is to give seven years; but to wealthy and clever farmers, landlords now offer longer periods.

North of Lancashire are the five counties next to Scotland—York, Durham, Northumberland, Cumberland, and Westmoreland. The most southern and least mountainous of the five is York, the largest county in England, and much exceeding in size any of the others, containing as it does 3,800,000 acres. It has been divided into three parts, called Ridings, each of which is still larger than an ordinary county: strictly speaking, the city of York forms a distinct district in the middle of the other three.

The West Riding is the appendant to Lancashire, and, like the latter, one of the greatest manufacturing districts in the world. It contains the great and well-known manufacturing towns of Leeds and Sheffield, the one as famous for its woollens, and the other for its hardware, as the towns of Lancashire are for their cottons. Near these immense marts of British manufactures, with the less important, though not less busy, towns which surround them, agriculture must necessarily flourish. Rents are as high as in Lancashire, and wages even higher, the latter reaching 2s. 6d. per working day. The land is nearly all in grass; and, like all districts where the population is great, dairy farming and the fattening of cattle are the chief occupations. Many farms are below twenty acres, and these, for the most part, are cultivated by the journeymen weavers, who thus add the produce of their farm to that of their loom. Among the most productive crops, Italian rye-grass has lately been conspicuous. Mr Caird makes out that forty tons of green fodder per acre—worth, at present prices, £48—may, with good management, be obtained from this rye-grass.

The East Riding is quite different from the West—without manufactures, no large towns, no small farms, and no superabundant population; nowhere perhaps is property less divided. After crossing the Humber, the quiet of an exclusively agricultural country succeeds to the bustle of a manufacturing one. These contrasts are frequent in England. The wolds of the East Riding are a continuation of those of Lincoln. Large farming there reigns supreme, and has been the means of increasing the production three-fold within the last fifty years.

The mountainous region begins again in the North Riding. It contains some fertile valleys, but the whole is

a vast table-land (*plateau*) of not less than 400,000 acres, which rises 1000 to 1500 feet above the level of the sea; these are called the Yorkshire Moors. Human ingenuity has discovered a way of turning them to good account. Both hill and valley are almost entirely in pasture; and the stock reared upon them, horses, oxen, and sheep, are all held in great repute. The best English carriage-horses are bred in the North Riding; they belong originally to the valley of Cleveland, but the breed now extends beyond its native valley. The sheep of the Yorkshire mountains are a distinct race, improved after Bakewell's principle, and these supply the principal markets of the north. As to cattle, the North Riding nowadays furnishes the largest quantity of the short-horned breed. This breed took its rise on the southern bank of the Tees, which river divides Yorkshire from the county of Durham; but since the death of the brothers Collins it has crossed to the northern side, where the finest specimens are now to be found. There are at most some half-dozen breeders, who to a certain extent have a monopoly, and who spare neither pains nor expense to keep up and improve the stock: it is not uncommon to see their bulls fetching £200 to £400; and they let them out for the season at corresponding prices.

The county of Durham is only half the size of the North Riding. Its population, however, is nearly double; this is as much as to say that it is not exclusively agricultural. Its principal wealth consists in coal mines, the inexhaustible produce of which is exported from Newcastle and the neighbouring ports. The two largest proprietors in the county are Lords Durham and Londonderry, who, during the last thirty years, have made enormous sums by their coal. One may judge of the capital required for the working of these mines by a single fact:

Lord Londonderry has constructed, at his own expense, a harbour for the export of his coal, and also a railway to transport it thither, costing together between £300,000 and £400,000. As yet, agriculture has only followed the movement at a distance. Clay-lands, with their usual difficulties, predominate, and upon them the old triennial course is still followed. The average extent of the farms is sixty acres, and the farmers, generally speaking common labourers who do everything for themselves, are not rich enough to lay out much upon the land.

At the time of the low prices, these small farmers, however economical and laborious, were not able to live. A revolution became necessary there also; and it has begun. Fortunately, property was not so much divided as farming, and most of the proprietors have been able, in default of their tenants, to make advances to the land. Lords Londonderry and Durham, and the Duke of Cleveland, in a measure rival each other in generosity. A large portion of the profits realised from coal is expended upon all kinds of improvements. Tile-drains are being laid down in every direction, farm-offices constructed, and large quantities of fertilisers and manures are imported, so that in a few years the face of the country will be quite altered. But the whole of it does not need remodelling; for upon some parts—the light soils, for instance, under the Norfolk rotation, and the rich grass-lands—farming is already in a prosperous condition. We must not forget that the breed of short-horned cattle came out of one of the Durham valleys.

The small county of Westmoreland is, as its name indicates, the *land of the west moors*, and the most mountainous, the most uncultivated, and thinly peopled part of England. The population is only one to nine acres. Agriculture flourishes in the valleys, especially in those

of Eden in the north, and Kendal in the south ; otherwise, it is the Switzerland of England, the land of lakes so celebrated by the poets. From Manchester and Liverpool a railway runs to the banks of Windermere, the first in order, as well as the largest and most beautiful, of all the lakes. Emerging from the noise and smoke of the manufacturing districts, one finds himself, as if by magic, in a smiling solitude, where all is peaceful, fresh, and pure; limpid waters, bracing air, and verdant soil, are exchanged for muddy water, murky atmosphere, and a soil black with swamps and collieries. A steamer carries you up the long and narrow lake, which winds like a river through charming scenery. Windermere is only ten miles long by one broad. At its further end passengers land at Ambleside, where excellent coaches are waiting to convey them through passes, and along the banks of other lakes, to Keswick.

In the south-east of Cumberland rise the highest peaks of England proper, Scafell, Helvellyn, and Skiddaw, which are the highest in the island, with the exception of the Caernarvonshire and Scotch mountains. The lakes which lie at the base of these masses of rock are a continuation of those of Westmoreland. At one time a population of small proprietors, called *Statesmen*, dwelt on the borders of these lakes. Each family possessed fifty to one hundred acres, which they had continued to cultivate for many generations. It is supposed that this class of people owed their origin to the necessity of defence against the invasions of Scottish marauders. This district being close upon the borders of Scotland, and much exposed to the incursions of marauders, it is said that the feudal lords made over portions of land to certain individuals, upon condition of personal service, as in the case of the Highland clans. Whether this supposition be true

or not, it is certain that the *Statesmen* existed in considerable numbers at the beginning of the present century. Their mode of life is pleasingly described in the poetry of Wordsworth, who lived much at the lakes.

One could wish that the portrait he drew were still true, but unfortunately it is not. The *Statesmen* rapidly disappeared before the large proprietary ; here and there may still be seen their old cottages, but they are now tenanted by farmers : on the very spot where a family of these *lairds*—as they were also called—found it impossible to live, with no rent to pay, a rent-paying farmer now makes a livelihood. Debts, from one cause or another, had accumulated upon these small properties, which at last absorbed all the return. The predilection of the *Statesmen* families for their old usages, the absence of ready capital, and want of skill, rendered the land less productive in their hands than in the hands of farmers with a little money and more ability. Nothing can stop a decay of this kind.

In the low grounds of Cumberland coal-pits again make their appearance, the produce of which is exported from the ports on the coast. This trade gives employment to a numerous population, whose requirements as usual exercise an influence upon agriculture. Whatever progress the art of farming has made during the last half-century, it has never been able to keep pace with the local consumption; the consequence is, that the populous towns are obliged to import a part of their supplies. Thus the farmers in the neighbourhood have an unlimited market before them, and a certainty of profit to stimulate their energies. The breed of short-horned cattle begins to spread among them, and their sheep are almost all either Cheviots or black-faced ; latterly, however, they have preferred a cross between the Cheviot and Leicester.

Netherby, a large property belonging to Sir James Graham, occupies the north-west extremity of the county, bordering upon Scotland, at the further end of the Solway Firth. Its extent is thirty thousand acres in a ring fence, and it merits the character of being one of the best managed properties in the kingdom. Sir James is one of the leading men in the House of Commons, and, as a statesman, seems to be the best qualified to succeed Sir Robert Peel: he exhibits, too, great ability in the management of his own affairs, and is a first-rate agriculturist. The starting-point of his improvements was, to get rid of the small farms, and to lay out the land in large holdings. In 1820, the property contained three hundred and forty farms, averaging ninety acres each; now there are only sixty-five. This reduction in the number of farmers admitted of a selection of the best—such as, from their capital, skill, and energy, offered the best security; and on entry, Sir James offered them fourteen years' leases in place of seven. The curtailment of the number of farms rendered a large number of buildings useless, which were consequently cleared away; and where the subdivision of fields was too great, hedges were removed. By these means rents were advanced as high as 30s. per acre for the best lands, the average of the whole being 22s., although the land generally is wet. Sir James is a great Free-trader; he felt bound to prove that, upon well-conducted properties, low prices should not necessarily bring about a reduction of rents. He made no reduction on his leases, but extended the draining considerably at his own expense, upon the usual condition of the tenant paying five per cent upon the outlay.

The farther we go west and north, the more necessary and efficacious does draining become. Nowhere in England is the benefit more observable than on the lowlands

of Cumberland. This is attributable to two causes—the clayey nature of the soil and subsoil, and the great abundance of rain. In London, the amount of rain which falls during the year is twenty inches ; in Lancashire, forty ; upon the coast of Cumberland, forty seven; and as much as one hundred and sixty in the high valleys of the lake district.* To carry off all this moisture, a larger drainage is necessary than in the rest of the island. At first the drains were made about two feet in depth, and about twenty yards apart, but the results were not satisfactory. Now they are four or five feet in depth, and six to ten yards apart, and care is taken to use only tiles of one and a half inch interior diameter, while one inch suffices elsewhere. By this means only have they succeeded in sufficiently draining the land. At present there are thirty tileworks in this part of the country.

All north of the Humber was once called Northumberland, but the name now applies only to the most northern county of England. Northumberland is situated on the eastern side of the range of the British Apennines, Cumberland occupying the western side, and, like the latter, it is divided into two parts, namely, mountains on the west, and low ground on the east. The mountainous part is mostly sterile. The range of Cheviot hills which

* The tropical amount of rain above mentioned, which it has recently been ascertained falls on the north-western coast of England, is confined to an extremely limited area—a few elevated spots in the mountain range, where arable culture is scarcely known ; and hence it can have little influence as affecting the general rule of drainage. The diameter of tiles, it may, however, be remarked, falls of course to be regulated as much by the length of drain in a continuous line, as by the quantity of rain falling within a given time; and as on the east coast, where no doubt throughout the year a comparatively limited amount of rain falls, the quantity is often fully greater in a short space than in districts of prevalent moisture, it is a mistake to suppose that tiles of a smaller diameter can be efficiently employed in districts showing a lower average of rain. In the exercise of a false economy, the tendency on both sides of the island is to make use of tiles of too limited a diameter.—J. D.

separates England from Scotland has, nevertheless, pretty good pasture, and on these the race of sheep which bears their name takes its rise. The beauty of the valleys intersecting these hills is much praised, especially that of the Tyne, which follows the line of the old Pictish wall, and debouches at Newcastle. The land there is excellent, and lets at a high rent.

The agriculture of the lowlands of Northumberland has a high reputation. In making an agricultural tour in England, everybody tells you to *go north, visit Northumberland, and, if possible, go to Scotland.* As far as regards Scotland, the advice is good, but not quite so in respect to Northumberland. This preference is based to a certain extent upon a predilection for the light soils, which lie between the mountains and the coast, and upon which the quinquennial course took its rise, known as the Northumberland rotation: it is simply a modification of the Norfolk — 1st, turnips ; 2d, wheat or barley ; 3d, clover ; 4th, clover ; 5th, oats. It was there also that the sowing of turnips in drills was first introduced, now so generally adopted by all good farmers. But the claylands all along the coast did not escape the crisis. Nevertheless, large property and large farming there predominate. A considerable portion of the county belongs to the Duke of Northumberland, and other noblemen and wealthy gentlemen possess large estates there. The celebrated Chillingham Park, belonging to Lord Tankerville, is sufficiently extensive to admit of a particular kind of wild cattle being kept in it. The general size of farms in the county is from two hundred and fifty to five hundred acres; some are one thousand, and even twenty-five hundred. The farmers are reckoned wealthy, and some undertake several large farms at one time.

However rich these farmers were, they had not all a capital sufficient for the great extent of their farms; and the fall in prices, bearing upon large quantities of produce, proved disastrous for them. It is a remarkable fact, that this is the only quarter in England where rents have declined since 1815: from about 15s. per acre, to which they had attained by the end of the war, they fell to 13s. before the crisis, and are lower since. The Duke of Northumberland has latterly reduced his rents ten per cent; and another large proprietor, the Duke of Portland, has done more, his reductions amounting, it is said, to twenty-five per cent. At the same time, these powerful landlords carry on, at their own expense, extensive works of draining, &c., upon the usual terms of five per cent. By means of these improvements, and supposing a reduction to be made in the over-sized farms, as in Wiltshire, the balance will finally be adjusted.*

* The above sketch of the somewhat anomalous position of the county of Northumberland is no doubt justified by facts; but to account in some measure for this, it may be necessary to explain, that the nature of the soil is very various, and, after all, it was to a very limited extent, until the system of thorough drainage was introduced, that turnip husbandry could be successfully practised; and even with this advantage, a large portion of the county is ill adapted for the most profitable occupation, being of that poor clay description which has been found least able to contend with low prices. Upon the dry lands on the north-eastern border, where the farms are chiefly large, no better system of husbandry is to be found, and rents have been well supported.—J. D.

CHAPTER XIX.

WALES AND THE ISLANDS.

HERE finishes our tour of England, the sovereign portion of the three kingdoms—the *sceptred isle*, as Shakespeare calls it :

> " This royal throne of kings, this sceptred Isle,
> This precious stone set in the silver sea."

Before proceeding to Scotland and Ireland, I shall say only a few words upon the dependencies of England—the Principality of Wales and the Islands. Wales consists of that peninsula bristling with mountains which extends from the mouth of the Severn to that of the Mersey, containing about five millions of acres, and which, in many respects similar to Cumberland and Westmoreland, in some parts even recalls to mind the most inaccessible mountains of the Highlands of Scotland. Elsewhere such a country would be almost deserted by man ; but, like most mountainous countries, it abounds with minerals, and the working of its mines and quarries with English capital has caused a proportionate agricultural development.

In an agricultural point of view, Wales may be divided into three distinct regions : the good, which includes the counties of Flint, Anglesea, Denbigh, and Pembroke ; the middling, Glamorgan, Caermarthen, Montgomery, and Caernarvon ; and the inferior Cardigan, Radnor,

Brecon, and Merioneth. In Flint, the best of all the counties, rents rise to the average of England, 25s. per acre; in Merioneth the most sterile, they are as low as 5s. The general average of the Principality is about equal to that of France, although both soil and climate are incomparably inferior. Population also follows about the same proportion, averaging one head to five acres. If the low grounds are equally populous with the neighbouring English counties, the mountainous parts may be classed among the most thinly inhabited of Europe; but even these uninhabited parts have made pretty good progress in farming during the last fifty years. The land is worth £10 to £15 per acre, which is as much as in one-half of France.

Here again, as we always find, it is the live stock which makes so ungrateful a soil available. In those districts which are susceptible of culture, the four-course system is being more adopted every day, and the improved breeds of England are becoming naturalised. In the steep and uncultivated parts of the country there is a kind of half-wild oxen, sheep, and horses, of small size, but docile and active, which seek their food among the rocks and precipices. Welsh beef and mutton are greatly esteemed; and the island of Anglesea alone exports thousands of these animals yearly to England. Formerly they had to swim the Strait, which nowadays is passed by the Menai Bridge. The small Welsh horses are also in pretty good demand.

Until lately, the general condition of the Welsh population was not very satisfactory. Although it is a long time since it became united to England, this Principality has continued to preserve its distinct language and peculiar character. The Welsh and Irish belong to the Celtic race; and as if this origin alone were not suffi-

cient to separate them entirely from the Saxons, the wild character of their country has helped to complete their isolation. Their ancient barbarism has stuck to them now for a long time ; and any efforts made by England to assimilate them have frequently, as in the case of the Irish, resulted in quite the contrary effect.

Gavelkind was the primitive law of the country—that is, land was equally divided among all the children ; and thus the land became covered with small and poor proprietors. About two centuries ago, the English Government considered it an act of good policy to introduce the law of primogeniture, thereby artificially implanting large property. But such changes, when they are not free and natural, are always difficult to engraft; the consequence has been that farming has been rather retarded than furthered by this premature reform. It proved a difficult matter to introduce the system of renting farms, owing to the absence of capital and skill. The ejected population fell into a condition of increased poverty; bad feeling was engendered, and showed itself from time to time in violent outbreaks. On the appearance of Chartism, Wales became one of its strongholds ; and the riots of the peasantry in 1843, known under the singular name of *Rebecca and her daughters*, show that the evil continued very nearly up to our revolution.

Men with blackened faces, under a leader disguised as a woman, called Rebecca, appeared suddenly at night in the most remote districts, burning turnpike gates, demolishing workhouses, and threatening proprietors and farmers in their houses. At other times the pretended woman-chief took the name of *Miss Cromwell, eldest daughter of Rebecca*, and under this formidable appellation, which recalled confused notions of old revolutions,

distinguished herself by exploits similar to those of her more notorious mother. England at first was amused by these half-frightful, half-ridiculous scenes, not unlike the insurrection of the *Demoiselles* in our Pyrenees some twenty years ago. However, the terror among those who had anything to lose became so great and so general that it was found necessary to send in troops, and appoint a commission of inquiry. By degrees order was restored, partly by voluntary submission, and partly by force. But the inquiry revealed distressing facts, which showed real suffering among the agricultural population.

"Do you wish to know who Rebecca is?" the Welsh peasants would reply, when interrogated respecting their chief,—"Rebecca is misery." And in fact Rebecca with them was only the symbolic expression of their grievances under English rule. Invariably their answers exhibited a vague expression of oppressed nationality. Sometimes it was the Anglican Church, whose tithes crushed them; sometimes their oppressor was the English proprietor, or the English steward, whom they looked upon as strangers living at their expense. We recognise in these complaints the feeble echo of those vented more loudly by their Irish brethren. It had been better had their national customs been respected, leaving them in possession of their small properties, as has been done elsewhere, and to have renounced the idea of introducing among them the English system.

Fortunately, increased activity at the mines and quarries at last mitigated these sufferings, by affording occupation for the superabundant supply of hands. Wales alone now supplies about one-third of all the iron produced in Great Britain, and iron is but a part of its immense mineral production. Improved means of commu-

nication, and among these two railroads, have at last penetrated this mass of mountains, and opened up channels for importation and export. Agriculture, as a trade, has become practicable ; and wages, which had fallen to the level of Ireland, have risen. No doubt, something more remains to be done, for the remoter districts still conceal much distress ; but assimilation of habits and ideas is being rapidly accomplished. The Druidical island of Anglesea, the last refuge of the Celtic religion and nationality, is now joined to the mainland by two bridges, one of which, the celebrated tubular bridge, a marvel of modern art, forms part of the railroad between London and Dublin. Throughout the country there are visible indications of a healthy revolution. Everything is improving, even to the coarsest and wildest races of animals. Those half-wild sheep, with hairy wool and straight horns, a kind of animal between the sheep and chamois, giving at most 20 lb. or 25 lb. of mutton, are gradually increasing in weight, and losing their coarseness, either through crossing with the Scotch breeds, or by simply improving their food ; and with the cattle and horses it is the same—they gain in height and breadth without losing their hardiness. One step more remains to be taken : most of the mountain pastures are still used as commons—that is to say, they are entirely neglected. When this ceases to be the case, the problem for Wales will be solved.

As compared to England, Wales is a mixture of Scotland and Ireland. For a long time it leaned to the worse, or Irish side ; but now it decidedly inclines to the good, bearing more resemblance to Scotland.

Our peninsula of Brittany, which is the counterpart of Wales, has fewer mountains. It contains, besides, im-

portant harbours, as Brest and Lorient, Nantes and St Malo, which have hitherto been wanting to Wales ;* its population is proportionately twice as numerous, and its agricultural development greater, at least as regards three-fourths of the country. In this respect, then, the comparison is in our favour, the cause being found in the difference of ruggedness between the two soils. Brittany owes also part of this superiority to a crop which I am astonished not to see more prevalent in England—that of buckwheat. These five departments alone produce about a million and a-half quarters of this grain, as well as an equal quantity of wheat, and it is much used there for human consumption. This is the case also in many parts of Europe, especially in Holland.

Although it is said, and perhaps with reason, that buckwheat, when made the chief article of alimentation, has a bad effect upon the brain, it is a valuable additional resource both for men and cattle ; and it is one of those crops which succeed best upon granitic and light and poor soils, provided the summers be wet, and the autumns without frost. Everything indicates that the soil and climate of a great part of England and Wales should be very favourable to this plant ; it is, nevertheless, scarcely ever cultivated, except for pheasants, which are very fond of it, and sometimes as a manuring crop to be ploughed into the land, for it is one of the best green manures known. Several English agricultural authorities have recommended its more extensive use—among others, Rham, in his excellent *Farm Dictionary* —but with little effect hitherto. We shall some day hear of its brilliant success from the other side of the

* Milford Haven, which is likely to be an important harbour, is only beginning to be resorted to.

Channel, when some enterprising and clever practical man there takes the matter up to try the experiment on a large scale.

We shall then learn—what is already known in some of our provinces, such as Brittany and part of Normandy, but scarcely out of these—all the advantages of this crop, which occupies the land only during three months of the year, and which consequently figures in the first rank among *catch* crops, which accommodates itself to all soils, requires little manure, has scarcely any exhausting effect upon the land, keeps the ground perfectly clean by the rapidity of its growth, and which, notwithstanding, yields on an average fifty-fold, and may easily be raised to double that quantity. Maize itself, although much more exhausting, does not give more. Chemical analysis shows that the flour of buckwheat is at least as nourishing as that of wheat, taking weight for weight; and we have processes of grinding now which remove its roughness.

Among domestic animals, the goat is one which, though little in favour owing to its capricious and destructive instincts, merits a better appreciation on account of its fecundity, and one which appears to be perfectly adapted for such districts as Wales. The last statistics show that the number of goats is rapidly increasing in Ireland, at which I am not surprised. Besides throwing usually two kids, while the sheep produces (in general) only one, and being of a more hardy constitution and less subject to disease, the goat, when well fed, gives an abundance of extremely rich milk, which may be made into excellent cheese. In France, where all agricultural industries are known, although often too very imperfectly practised, whole districts owe their prosperity chiefly to the goat. Such is the Mount

d'Or, near Lyons, where a goat yields as much as a cow elsewhere. As population increases, I have no doubt the goat will be more appreciated ; only we must learn to treat it properly, and reclaim it from that half-wild state which rendered it dearer to the shepherds of Theocritus and Virgil than to agriculturists and cultivators. All the gifts of Providence are good when kept in their places, and treated with skill. The goat's place is on the barren mountains, where shrubby plants can be cultivated for its food, unless, as at the Mount d'Or, it is subjected to the strictest stabulation.

Civilisation tends to equalise in value soils the most unequal in appearance. The worst may produce a great deal, provided that only is required of them which they are capable of producing. The constant aim of cultivators being to produce cereals, it is often the case that lands yield no income, because the expense of raising such crops upon them costs more than the produce is worth. But cereals are not everything. With the vine in France we obtain, upon soils unsuitable for corn, results equal, or even superior, to those from lands the most favourable to wheat. In other places the resinous pine gives marvellous results from the driest sands ; rice turns the marshes to account, &c. The skill of the agriculturist lies in discovering what is best suited to the different soils. Virgil long ago wrote in his *Georgics*,—

"Nec vero terræ ferre omnes omnia possunt."

The small islands belonging to England partake of the general prosperity of the mainland. A good report is given of the state of agriculture in the Isle of Man, lying midway in St George's Channel between England and Ireland, and which was once a separate kingdom. Although very mountainous, the population numbers fifty thousand, upon an area of one hundred and fifty

thousand acres, half of which only is susceptible of cultivation; and still the island raises a surplus of wheat, barley, and cattle for exportation. With agriculture the inhabitants combine the occupations of fishing, navigation, and mining. Comfort is pretty general throughout the island. For the most part the land belongs to small proprietors, or *yeomen*, who till the land themselves. This division of property and farming is very ancient in the island; and here, at all events, the English Government has had the prudence not to interfere with it.

But the triumph of small property and farming is to be found, as I have already had occasion to show, in the island of Jersey, close upon our own coast. The extraordinary richness of this small island, which contains only forty thousand acres, with a population of fifty-seven thousand, may partly be attributed to the large sums expended there by the British Government to maintain it against us. But France also lays out enormous sums in Corsica, which has many more natural resources than Jersey, and still it remains poor and unproductive, notwithstanding the sum it costs us. The population of Jersey is twelve times denser than that of Corsica, and yet the former enjoy a greater degree of comfort. Guernsey and Alderney almost rival Jersey, and truly all three islands rank among the finest jewels in the British Crown.

Nowhere is the difference which at present exists between a French district and most parts of England more painfully striking than in comparing Jersey with the French coast opposite to it. It lies at the entrance of a bay, the two sides of which are formed by the department of La Manche on one side, and that of the Côtes-du-Nord on the other. Climate, soil, products, race of people, all resemble each other. These two departments

rank among the most prosperous in France: that of La Manche standing eighth out of eighty-six, and the Côtes-du-Nord twelfth, in point of density of population and richness; yet, while Jersey counts nearly three inhabitants to two acres, La Manche and the Côtes-du-Nord count less than one; and the same disproportion is observable alike in the gross and the net produce of the land. Certainly in this instance the difference cannot be attributed to large property and large farming, since the land is much more divided in Jersey than with us. It must be admitted that the real cause lies somewhere else.

This small island has uninterruptedly enjoyed, for many centuries, almost complete independence, which has secured to it the two greatest earthly blessings—peace and liberty. It has not known the bad government, revolutions, or wars which have so often retarded the progress of its French neighbours. In this respect it has been more favoured than even England itself.

With such a history, everything should prosper. Left to itself, the local development took the form of small property and small farming; though it might have taken others, which would equally have succeeded. I believe, however, that had they adopted other methods, these islands would have found it difficult to support such a large population. As they have plenty of capital, small property and small farming become, so to say, unbounded in productiveness. A large empire could not be organised quite in this way, because the condition and circumstances of its people must necessarily be more various. These islands have neither to govern nor to defend themselves; they have nothing to do but to be happy, and they are so; a limited and monotonous sort of happiness no doubt, but of old standing, and worthy of respect. They have made no figure in the arts, politics,

or war; their part is more humble. Industrious and peaceful hives, they show what unfettered labour at length produces.

Mr William Thornton, in his *Plea for Peasant Proprietors*, lays great stress, and justly so, upon this agricultural and social condition; and Mr Mill, in his *Principles of Political Economy*, agrees with Mr Thornton. A school has lately started up in England as advocates for small property and small farming. I rejoice to see such ideas spreading in the country of Arthur Young. Provided the reaction is not carried too far—and for this the English may be trusted—it is sure to produce good effects. Even in Jersey, if the agricultural population is numerous, the non-agricultural portion is numerous also.

Although the soil of Jersey is granitic and poor, the aspect of the island is delightful; it may be called a forest of fruit trees, with meadows and small cultivated fields interspersed, filled with charming habitations, decked with virgin vines, and shady walks winding under the trees. David Low observes that the subdivision of the land, which might seem likely to become infinite in the course of a certain number of generations in so small and populous an island, is limited by arrangement among the families, so that a stop is put to it when it becomes inconvenient. This example ought to give new confidence to those who are afraid of seeing the soil of France frittered into dust.

CHAPTER XX.

SCOTLAND.

SCOTLAND exhibits one of the most striking examples of the power of man over nature. I know of only one country which can be compared with it in this respect, and that is Holland. Switzerland even does not present such great obstacles to human industry; but what adds still more to this marvellous rise of prosperity upon so ungrateful a soil is, that it is all recent. The antecedents of Scotland are different from those of England. Only a century ago it was one of the poorest and most barbarous countries in Europe; but now, although the last remains of its ancient poverty have not quite disappeared, it may be said that, upon the whole, there is not a better regulated country under the sun.

The total production during the last hundred years has increased tenfold. Agricultural products alone have increased in an enormous ratio. In place of the periodical scarcities which formerly devastated the country, and one especially, which lasted from 1693 to 1700, leaving an indelible impression, alimentary commodities are now produced there in such abundance as to admit of a very large export. Scotch agriculture is at this day superior even to English, in some districts at least. It is to the model farms of Scotland people send their sons to be taught farming. The best books upon farming

which have appeared of late years, have been published in Scotland; and when an English proprietor requires a good bailiff, he generally sends to Scotland for one.

Scotland and its adjacent islands contain a total of nineteen millions of acres, or 7,600,000 hectares, nearly three-fourths of which are absolutely unfit for cultivation; this latter portion is mostly to be found in the Highlands and Islands of the north,—as the Hebrides and Shetlands. The two and a half million hectares of arable land may be divided as follows:—

	Hectares.
Meadows and artificial pasture, . . .	1,000,000
Oats, ...	500,000
Barley, ...	200,000
Wheat, ...	150,000
Turnips, ...	200,000
Clover, ...	200,000
Potatoes, ...	100,000
Fallows, ...	100,000
Other crops, ...	50,000
	2,500,000*

The great country for oats is the Highlands, which grow scarcely any other grain. In the Lowlands, the four-year course is that now generally followed. The average gross production of each crop being about the same per acre as in England, the total vegetable production destined for human food, including oats, which forms, in fact, the chief food of the country, may be estimated at £8,000,000 sterling, and the animal production at about one-third more, which makes the whole production £20,000,000. This, for a population of 2,600,000, gives an average of £8 each, as in England, while it is only £5, 10s. in France; and there is less

* The remark which we made as to the distribution of the soil of England holds also here. No *data* exist from which any precise information can be hazarded on the subject; but this uncertainty, we have no doubt, will be satisfactorily set at rest by the returns to be completed in the present year.—J. D.

reason for the reduction of twenty per cent here, Scotch and French prices being more on a par.

How comes it that Scotland has so rapidly attained this high production, in spite of the natural infertility of her soil and climate ?

Property in Scotland is not so much divided as it is in England, and entails are stricter and more common. The number of proprietors is estimated at 7800, which would give 2500 acres as the average size of properties ; but this high average is owing to the extensive Highland estates, some of which are of 200,000, 400,000, and even 700,000 acres. In the Lowlands there is a much greater subdivision, where the average falls to 500 acres. By far the most extensive proprietor in the Lowlands is the Duke of Buccleuch, whose Palace of Dalkeith is situated in one of the finest farming countries. The other great Scotch noblemen, the Dukes of Sutherland, Atholl, and Argyll, the Marquess of Breadalbane, &c., have the greater part of their estates in the Highlands. Deducting these large rentals, we find that three-fourths of the Scotch proprietors have an average income of £400 to £500 per annum. Two-thirds of the land, producing about one-third of the whole rental, is in the hands of large proprietors, and about one-third, giving the remaining two-thirds of income, belongs to the other category. Small property, although not quite unknown, prevails less in Scotland than anywhere else ; less even than in England. Upon the whole, Scotland presents a favourable specimen of large property.

With farming it is rather different. The number of farms is reckoned at about fifty-five thousand, with an average rent of £90. This, it will be observed, is the small, or at least the middling-sized farming, rather than the large. The average of farms in England is just

double—that is to say, £180 of rent. In the Highlands there are farms of many thousand acres each; but we find a number in the Lowlands of not more than fifty; and thousands of acres in the north often yield less to the proprietor or tenant than fifty situated in the fertile country around Edinburgh and Perth.

The usual practice of tenure in Scotland is much superior to that which exists in England. Leases, in place of being annual, are mostly for nineteen years. This material difference proceeds from various causes. In the first place, the Scotch proprietors attach less importance than the English to the power of influencing the votes of their tenants, there being less of party spirit and politics among them. Then, again, the rise of agriculture in Scotland being of more recent date, the old practice of tenancy *at will* has not had time to establish itself, while the preferable use of long leases has been prevalent from the first. We have already observed that annual leases have not interfered much with England's agricultural prosperity; but had the other system been introduced, it is probable that progress there would have been still greater than it is: this, at least, is what we may infer, judging from what has ensued in Scotland, where, upon long leases, notwithstanding their poverty and ignorance at starting, a few years have produced a class of farmers equal, if not superior, to those who have been farming for centuries in England.

The Scotch farmers, who, generally speaking, were not very well off a hundred years ago, are still a little inferior to the English in point of capital. While the working capital in England is £5 to £6 per acre, it is only £3 to £5 in the Lowlands, and 6s. to 10s. in the Highlands. The Scotch, however, make up for the difference by their greater economy, and by a greater amount of personal

labour. The farmers for the most part work themselves; their capital likewise is rapidly increasing. Besides that saving propensity which is one of their characteristics, they have proportionately a larger share in the distribution of the produce. The profit, which in England does not exceed half the amount of the rent, in Scotland reaches commonly two-thirds, and sometimes equals the rent itself.* This is peculiar to Scotland, and forms one of the most striking features in its rural economy. This proportion, so favourable to the progress of farming, may be attributed to the system of long leases, which prevents the proprietor coming in so often to participate in the benefit arising from improvements as under annual leases. It is but justice, also, to ascribe it to a spirit of moderation and good sense on the part of the Scotch proprietors, who, having less need for show and expense than the English proprietors, can afford to be less exacting in their rents. After all, and this they fortunately understand, it is only laying by for the future; for with the farmer's prosperity the richness of the land is increased.

The superiority of the Scotch system is apparent in other things. Thus, in England and Ireland the law considers a lease personal property, and consequently divisible equally among the children of the tenant when he dies. But in Scotland it is looked upon as real property, and as such passes intact to the heir-at-law. Disastrous consequences have resulted from the former

* Though the average capital employed in the cultivation of land in Scotland, from the larger proportion of inferior soil, cannot fail to be under that of England, we believe it will be found that, upon farms of a similar description, the amount expended by the Scotch occupier is fully equal to the English. Our experience has rather taught us that rents, in the properly rural and best agricultural districts of England, are under those of Scotland generally. M. Lavergne seems afterwards to admit this to some extent. We are not aware that farming is more profitable in Scotland; and if the Scotch farmer makes more money than his neighbour of England, it is because he spends less.

system in Ireland, which, though not the entire cause of agrarian outrages in that country, has no doubt been one of their fruitful sources. The law of Scotland has not had exactly large farming for its effect, that being rather the exception there than the rule; but it has in some measure put a stop to too great a division, and encouraged a spirit of industry. The younger sons of a farmer, knowing that they have no title to share in their father's lease, seek a livelihood in other ways, while the oldest prepares himself at an early period for the heritage which awaits him. This is a new and successful application of the right of primogeniture in matters relating to the soil, and it is favourable to that natural movement which, in a society in a state of progress, diverts the surplus population from rural occupations into other channels. Without this law the tendency to division might have been dangerous to Scotland; but there is less risk of this in England, where manners and conventions incline rather in the opposite direction.

In most of the Scotch leases, especially on grain farms, the rent is not a fixed money-rate, payable under any circumstances, but variable, wholly or in part, according to the current value of grain; that is to say, it is represented by a payment in kind, converted at the market price, with a maximum and minimum limitation for periods of scarcity or abundance. In this way the farmer is protected against sudden fluctuations in the value of his commodities, as well as in that of money. This clause has been widely adopted in England since the crisis, and is considered to be an improvement on the principle of a fixed rent.

Finally, all gratuities or *grassums* are done away with, as well as all extra expenses on entry, and indemnity to the outgoing tenant, called in England *tenant right*, of

which I shall speak more particularly when I come to Ireland. Suffice it to say here, that in Scotland opinion is unanimous in respect to avoiding all unnecessary charges upon the incoming tenant, so that his capital may be as little diminished as possible. The usual term for renewing leases is Whitsunday, as being the most favourable period to prepare for the crops of a new course.*

The theory of leases has nowhere received greater attention than in Scotland, where it may be said that the system has reached perfection.. They have been able to dispense with this minuteness in England, for time and the general wealth of the country rendered it unnecessary. But in Scotland, where they had no time to lose, and where they had to begin on small means, it was necessary to consider beforehand what were the best conditions for developing production. Everything is directed towards one end, namely, the formation of farming capital. Scotland, and not England, is the quarter to which we must go for models when introducing the lease system into a country where it does not already exist, and where the object is to convert poor and ignorant cultivators, *métayers*, and farm-servants, into intelligent and well-to-do farmers. Unfortunately, the Scotch system will not please everybody, for it involves many sacrifices on the part of the proprietors—lengthening of leases, moderating of rents, payment in kind; but it is almost necessary to put the farmer who has no means of his own in a position to make something; and experience has proved that such concessions were exceedingly wise. Rents are already, on an average, almost as high in the better parts of Scotland as in England; in some particular spots they are even higher; and the interiors of the

* The entry to the fallow, or the portion intended for green crop, being generally arranged to be given in the previous winter or early spring.—J. D.

farm-houses, which were at one time so poor, present a striking appearance of comfort at the present day.

In addition to the excellent principle of leases, there is another cause of progress which we do not find existing to the same extent in England, and that is the superior system of credit which prevails in Scotland.

The English have for a long period extensively availed themselves of credits, and one of the chief elements of their power has been the old-established practice of banking; but this very antiquity is the reason why the organisation of these banks is imperfect in many respects; though the abundance of capital supplies to a certain extent that wherein they are deficient. There is besides in England a spirit of speculation and extravagance, which might make it dangerous to give a greater extension to an instrument so powerful for evil as well as for good. In Scotland, on the other hand, the character of the people is so cool, calculating, and correct, that the widest system of credit has not only been unattended with any disadvantages, but productive of the most magnificent results. Adam Smith was a Scotchman, and we find all his countrymen more or less endowed with the sagacious and decided character which belonged to that great man. There is no country where the true value of money is better understood than in Scotland. Banks were already in existence in Adam Smith's time, and he has given a careful account of their working. It is with reference to them that he wrote the following often-quoted passage: "The gold and silver which circulates in a country may be compared to a highway which, although instrumental for the conveyance of corn and hay to market, yet does not itself produce a single grain of corn. The operations of a well-conducted bank, *by opening up, as it were, a road in the air*, allows a country to turn its roads into

pastures and corn-fields, and thereby to increase the produce of its territory."

The general principle of the Scotch banks is as follows: There are eighteen in all, of which seven have capitals of not less than a million sterling, having their head-offices in the principal towns, and branches all over the country. There is no district, however small or remote, that has not at least one branch; and it is reckoned that there are four hundred of these spread over Scotland, which is equal to one for every six thousand of the population. If France had as many in proportion, she would have six thousand. These banks all issue notes, payable in specie at sight, which are received with such confidence that everybody prefers notes to coin, even for small payments. Money, properly speaking, has been almost entirely put out of circulation—so much so, that the metallic circulation of Scotland is supposed not to exceed £400,000 to £500,000. Advanced as England is, it is not so far forward either in the number of its banks or the credit they enjoy.

Runs on the banks, which frequently happen in England, and oftener in Ireland, are unknown in Scotland. Independently of habit and custom, which exert such a powerful influence over men, and which, when a sign or representative is universally adopted in everyday business, naturally keeps up its value; independently also of a certain composure in the national character, which does not admit of being easily alarmed, this marvellous state of security is based upon well-grounded principles; for not only are all the shareholders of a bank, by the law of England, responsible for all the obligations of that bank to the whole extent of their fortune, but the issue of notes by each bank has been limited by law since 1845, as it was previously so in practice, to about one-third of its capital, unless a disposable amount of coin is kept in its

exchequer to represent any issue in excess; and the banks being obliged to exchange each other's notes on presentation twice a-week, they exercise upon each other a control which renders all excess of issue impossible.

The credit of the banks being thus established, they make the following use of it, and it is in this respect more especially that they prove useful. They receive in deposit any sum above £10, and notwithstanding that these monies can be withdrawn at will, interest upon them is allowed at the rate of 2½ or 3 per cent. Consequently nobody keeps money by him; every one has his account at the neighbouring bank, where he pays in or draws out according as he requires. It is incredible how greatly this custom encourages economy in all classes of society. Servants and labourers, as soon as they can scrape together £10, have their banking accounts like their masters.

These deposits do not lie idle, but are advanced by the banks, at from 4 to 5 per cent, to those who can furnish security. Independently too of the ordinary discount business, any one known as a clever, industrious, and respectable man, and who can offer two good sureties, may obtain a credit according to the confidence he merits; this is called a Cash account. These open credits do not amount, for the whole of Scotland, to any very large sum, being reckoned at four to six millions sterling. Those who have such accounts are always anxious to clear them off as soon as possible; and their sureties also look to its being done, so that this class of debtors is constantly changing. But this floating sum of four to six millions, distributed over a community who commence with small capitals, has produced the happiest results upon the progress of industry and agriculture; and so judicious is the

selection made by the banks of those to whom they grant such facilities, that bad debts are rarely made.

This excellent machinery gives an incredible facility in the transacting of business; sales and purchases of any importance being paid for by simple cheques, a small issue of notes suffices for the transaction of a large amount of business. Agriculture as well as manufactures is benefited by the system. It may be said that money is never wanting to a reasonable extent, even for agricultural adventure. It seems to be a point of honour not to take an undue advantage of the facilities given, and thus this general credit is maintained. Besides, all know each other in these small towns, where every man has his banking account; everybody is aware what his neighbour is about, and if a farmer borrows from his banker, the reason why he does so is known. These banks occasionally lend money, but only for short periods, on mortgage, which is just the same as our redemptive sale (*vente à réméré*). Loans on mortgage are less requisite for farming purposes in Scotland and England than in France, because farming in the two former countries is more generally distinct from property; they exist, nevertheless, to some amount, owing to the advances proprietors are often required to make for permanent improvements; and under that form, as well as in other ways, plenty of money is to be had on good terms. Life assurance companies also lend on mortgage security within the United Kingdom.

Means for propagating a knowledge of the best methods of cultivation are adopted in Scotland quite as much as in England. The Highland and Agricultural Society of Scotland, dating as far back as 1784, has the start by half a century of the Royal Agricultural Society of England.

It is composed of nearly three thousand members, who pay an annual subscription of 25s. each, or a life-payment may be made, varying from £8 to £12, according to circumstances. The present President is the Duke of Roxburghe ; the Dukes of Buccleuch, Sutherland, Hamilton, Montrose, &c., have successively filled that office. The Vice-Presidents are Lord Aberdeen, Lord Breadalbane, Lord Dalhousie, Lord Douglas, &c. A number of prizes, distributed into classes, are annually given by the Society, for the practice of agriculture and special crops, woods and plantations, improvement of waste lands, agricultural machinery, all kinds of live stock, dairy produce, and cottages and gardens. These competitions, which always conclude with a dinner, where a small farmer may seat himself beside the greatest aristocrat, are at least as famous as those of its English rival. The Society has an agricultural museum at Edinburgh, where may be seen models of all the implements used in Europe, samples of all kinds of cultivated grain, and reduced models of the animals which have obtained prizes since the beginning of the competitions. Mr Peter Lawson, seedsman to the Society, has the finest establishment of the kind existing. The unique collection of seeds which he contributed to the Great Exhibition of 1851 was universally admired.

Special newspapers, cheap pamphlets, local meetings, subscription lectures, diffuse, as in England, all kinds of information on the subject of husbandry ; and as a testimony to the scientific interest attached to these studies, there has been for many years past a chair of agriculture in the justly-esteemed University of Edinburgh, which is at present (1853) occupied by the celebrated David Low.

But all these encouragements, however powerful, do

not sufficiently account for the rapid progress of Scotch agriculture; they have been the means, but are not the first causes. The true causes are the same as those which exist in England, and if their effect has been more rapid, it is because they sprang up suddenly, and not by degrees. I allude to industrial wealth and free institutions.

If England's history as a manufacturing country is brilliant, what shall we say of Scotland? We may judge by a single example. The counties of Lanark and Renfrew, where manufactures and commerce are most active, have increased in population in the space of a hundred years from one hundred thousand to six hundred thousand, and Glasgow alone from twenty thousand to four hundred thousand. Clydesdale, once deserted, now rivals Lancashire for its collieries, manufactories, and immense shipping trade. In 1750 the germ even of this wealth did not exist; it was English capital, combined with the plodding and frugal genius of the Scotch people, which in so short a time made that unproductive district what it now is. Strong proof this of the advantages which may accrue to a non-manufacturing country by being associated with one rich and already industrial. Scotland, as long as she remained separate from England, and dependent on her own resources, only vegetated; but as soon as the capital and experience of her powerful neighbour broke in upon her, she took a start quite equal to England.

This sudden growth of manufactures has been increased, as always happens, by a corresponding advance in agriculture. In proportion as commerce and manufactures multiply men and augment wages, agriculture renews its efforts to supply food for the constantly increasing mass of consumers; and in a limited country

like the Lowlands, a population such as that of Glasgow and its dependencies causes the demand for agricultural produce to be felt over its whole extent.

The Union besides was the great means of at once giving value to Scotch agriculture, by opening up the immense market of England itself for her produce; and even now, notwithstanding an increasing local consumption, there is a considerable export of Scotch agricultural commodities for the English markets.*

The pastures of Galloway and Forfarshire, and even the remote Highlands, send their thousands of young cattle to be fed and fattened on the grass-lands of the South. Even in the markets of London, where they are greatly appreciated for the quality of their beef, may be seen the shaggy Highland cattle, the black cattle of Angus, and the polled cattle of Galloway, all distinctly recognisable in character. So with us, the red cattle of Auvergne, the white from Charolais, the brown from La Vendée, and the russet from Limousin, which are sent in droves to the *abattoirs* of Paris, are easily distinguished from the speckled breeds of Normandy and Brittany. Scotland sends to England, besides, a large portion of her wheat, reserving scarcely more than the oats and barley. In this way, for the last hundred years she has been a seller to England to the value of tens of millions sterling.†

But England's best gift to Scotland, as in that is included all the rest, is her constitution and political character.

Up to 1750 Scotland was the stronghold of feudal

* But perhaps the most valuable contribution which Scotland now makes to the English stock markets is in the great quantity of fat cattle and sheep which she sends to England from her eastern counties—particularly from Aberdeen, East Lothian, Berwickshire, and Roxburgh—a great part of the former of which are imported lean to the latter districts from the South.—J. D.

† We fear this leads to an inference which would be far from correct. Un-

government; and it was not until after the battle of Culloden that her eyes began to be opened. A higher sentiment rapidly succeeded, so that fifty years later no part of Great Britain was more attached to the House of Hanover, the personification of modern liberty. The Scotch, so long faithful to their patriarchal traditions, now found themselves all at once brought into contact with English customs and laws, so highly favourable to individual independence and order. From the first they went even greater lengths than England. It may be said that Scotland, in a political point of view, is an improved edition of England.

In no part of Europe is the machinery of government more simple; its parallel is perhaps to be found only in America. The system of central administration, so much vaunted, and which in France levies a contribution upon three-fourths for the benefit of the other fourth, and denies all personal or local interference, is there quite unknown. The public functionaries are few in number, and for the most part unsalaried. None of the abuses which custom has sanctioned in England have been set up there. The English Church establishment, which costs the rest of the United Kingdom eight millions sterling of tithes, does not extend to Scotland; parish and county rates have been limited to strict necessities; the poor-rate, recently introduced, has not fallen very heavily; in one word, direct taxation of all kinds upon the soil scarcely exceeds 6d., while it amounts in England to 8s. per acre. Even the income-tax is not very rigorously

doubtedly Scotland, in many seasons, exports a considerable quantity of wheat to England, and, in a manufactured state chiefly, a large quantity also of oats and barley; but there is, at the same time, an interchange of wheat as well as barley to some amount in ordinary years; and it is not thought, upon the whole, that Scotland generally grows more than is sufficient for its own requirements—if indeed even so much.—J. D.

collected.* It yields half a million sterling, which is only one-tenth of the amount contributed by England.

That beneficial expenditure which taxation promotes elsewhere is, nevertheless, not neglected; but it is England which bears the heaviest charges, such as the cost of the army and the maintenance of military ways. In this respect Scotland is on a large scale what Jersey is on a small. Spared the expense of the national defence, which is the first care and heaviest charge of a nation, she is free to devote all her resources to the development of her prosperity. That spirit of order and economy which regulates individual affairs is carried into the public expenditure, and causes money to go much farther. What is not done by means of taxation is accomplished, both more speedily and at a more moderate cost, by public spirit or private enterprise. Scotland is the cradle of economical science, and there its lessons have found their best and most direct application. A Scotchman trusts to his own resources, or looks only to those whose interests are identical with his own; he does not waste his time in agitation and fruitless proceedings; having no favours to ask, he occupies himself wholly about his own affairs, and conducts them well, because nothing hinders or diverts his attention. There is an absence of all those rivalries engendered by ambition; in private life each lives as he likes without interfering with others, and, as often happens, when any one requires the assistance of another, matters are easily arranged upon the principle of mutual interest.

* This must be taken as rather a partial account of the immunities of Scotland. In some recent discussions as to the amount of burdens affecting land, we have seen those in the principal agricultural districts of Scotland variously stated at from five and a half to thirteen and a half per cent on the rental; thus fully equivalent on the average to the sum set down above as exigible from the soil in England. (See Pamphlet by Mr Aitchison of Alderston, March 1854).—J. D.

In this small country, of less than three millions of inhabitants, the connection of interests—that fundamental principle so indifferently comprehended elsewhere—is apparent and felt by all. Scotland, in fact, is one family.

Is it surprising that agriculture should have profited by such a concurrence of circumstances? Its progress, especially from 1790 to 1815, was extraordinary; that is to say, from the time when these combined causes began powerfully to operate. England showed herself capable, during that period, of taking off an almost indefinite quantity of commodities; corn and butcher-meat rose to enormous prices in the English markets, which, for a new country like Scotland, could not fail to give an immense impetus to production.

If it is true, according to Ricardo, that a small capital brought to bear upon a virgin soil produces more at first than a larger amount applied at a later period, this axiom was then most fully realised; on certain lands the return was tenfold in the short space of a few years. The general comfort, too, was increased to such an extent, that, according to a French traveller (Simond), who visited Edinburgh in 1810, houses in the Old Town were pointed out to him, inhabited by the working and lower classes, where persons of the highest rank had only lately resided. "A chair-porter," writes a correspondent of Sir John Sinclair, "has lately quitted Lord Drummore's house because it was no longer habitable; the Marquess of Douglas's is occupied by a cartwright, and the Duke of Argyll's by a hosier at a rent of £12."

When the fall in prices took place after the peace of 1815, this progress began to abate; it was not possible that it could go on at the same rate for any length of time, but it still continues to a certain extent. Railways have been productive of much greater effects in Scot-

land than in England, in this respect, that they have produced a more intimate union between the two countries. The cheapness of transport, the quickness of communication, and the doing away with a necessity for agents for the sale of produce, have all contributed to keep up prices in opposition to other lowering tendencies; and on this account the crisis of late years has been much less felt in Scotland than in England. But few complaints have found their way across the Tweed; both proprietors and farmers have put a good face on the matter, and, in fact, they have suffered but little. The great economy of the one, and the wise moderation of the other, conjoined with energy on the part of both, prepared the way for that which was completed by the extension of markets.

CHAPTER XXI.

THE LOWLANDS.

THE observations I am about to make have reference more particularly to the Lowlands, which comprise about one-half of Scotland—the best half—yielding nine-tenths of the whole produce of the country.

The most inferior part of this division of Scotland is that bordering on England, and which is more or less covered with the ramifications of the Northumberland hills. It consists of the three counties of Dumfries, Peebles, and Selkirk, and the mountainous part of Roxburghshire, containing in all about 1,200,000 acres.*

Selkirk and Peeblesshire are quite Highland in their character, only a tenth part being capable of cultivation. This is the country so celebrated by Sir Walter Scott under the name of the Borders. The Tweed flows through it, laving with its pure waters the residence of the great novelist—Abbotsford. The principal scenes in the *Lay of the Last Minstrel*, *Marmion*, and the *Monastery*, are laid in its passes, where the war-cries of two neighbouring and hostile people so often resounded. It was there, among the shepherds' huts, that Sir Walter Scott, in his youth, collected those legends which inspired his first

* This can only be said of these districts as regards the production of grain generally. Here are very valuable pastoral districts, celebrated for the production especially of sheep.—J. D.

song. That country, once so unsettled, now enjoys the most perfect security. Its thin herbage, only sufficient for sheep-pasture, is now devoted to the rearing of these innocent animals ; and all the strife now witnessed is that of the Cheviot against the old black-faced breed, which gradually retreats before its rival, as the bandits and troopers of old did before the shepherds. The average rent may probably be 3s. to 4s. per acre, which is pretty high simply for pasture.* These hills are subject to severe storms in winter, which used to bury whole flocks ; but better provision has now been made for their shelter.

Abbotsford is situated at the foot of these mountains, where the more fertile and better cultivated country begins. Roxburghshire, or, as it is sometimes called, Teviotdale, contains the districts where the highest farming flourishes, and where it was first introduced. A Roxburghshire farmer, called Dawson, has been the Arthur Young of Scotland ; and, more fortunate than Arthur Young, he succeeded in carrying his theoretical knowledge into successful practice. The farmers around him have followed his example, and the consequence is that we find this part of the country covered with fine crops.

I remember stopping one day at one of these farms, situated upon the left bank of the Tweed, opposite to Abbotsford : the soil of it was better than the average, and a great part was in pasture ; nevertheless it let for 16s. an acre. The farmer, with some degree of pride, showed me his implements and his stock. He had a water-power thrashing-machine, and next year proposed

* This average, we incline to think, is low. Measurement is not much regarded in these mountains ; but we know some extent of land on the Cheviot border, entirely devoted to the rearing of sheep, produces from 8s. to 10s. per acre.—J. D.

to purchase a steam-engine. He had just laid in his winter stock of oilcake for his cattle, which amounted to fifteen tons. He took me over his fields, which lay on the slope of the hill, and I followed him with an admiring eye for his barley and oats, but my mind a little abstracted, I confess, by the sight of Abbotsford, which lay below us, its turrets reflected in the Tweed. "If Scott were still alive," said I to myself, "this fine fellow would no doubt be one of his heroes in the *Tales of my Landlord.*" Who does not remember the delightful description of the farm of Charlie's Hope in *Guy Mannering*, with its well-drawn characters of Dandy Dinmont and his wife Ailie, and all the amusing incidents of fox-hunts and salmon-fishing? Charlie's Hope was not far from where I then stood, just over in the valley of the Liddell, behind the blue-tinted peaks on the verge of the horizon. Dinmont is the local name for a shearling male sheep.

A few miles further eastward, after coming down from the Lammermoors (another name famed in poetry and song), we enter upon the undulating country which surrounds Edinburgh, called the Lothians, and containing also about 1,200,000 acres. The farming here is certainly not to be equalled. Rents of 30s., 60s., and even £5 per acre, are not uncommon; the average is 25s., with nearly as much in the shape of profit for the farmer. The meadows in the neighbourhood of Edinburgh, which are irrigated with the sewage from the town, show the maximum rent hitherto obtained in Great Britain; some let as high as £30 per acre.*

A great part of the wheat produced in Scotland is

* These meadows are cut six or eight times during the season, and have brought, we believe, in some instances, above £40 per annum.—J. D.

grown in the Lothians, which are particularly famous for cereal crops. The soil at one time was reckoned incapable of bearing even rye; only barley and oats were cultivated, and these are still the cereals generally grown in the rest of the country. It is mentioned that in 1727 a field of wheat, of eight acres, about a mile from Edinburgh, was the object of universal curiosity. Now, one-fifth of the land, or about 250,000 acres, is in wheat, and in good seasons this crop yields from thirty to forty-five bushels per acre. Here again it is the Norfolk rotation more or less modified according to local circumstances, but still maintaining the general character of that system, which produces this large return. Turnip cultivation, the basis of the rotation, is nowhere better understood than in the Lowlands. Indeed, we find in the Lothians, more than in England, the realisation of all agricultural improvements. A complete system of drainage has existed for a long time past. Every farm, or nearly so, has its steam-engine. Stabulation of cattle has been long in common practice. The thrashing-machine was invented, at the end of last century, by a Scotchman of the name of Meikle, and was in use in Scotland before it reached England. It was also a Scotchman (Bell) who invented the reaping-machine, and who claims priority over the Americans. The most successful and extensive experiments, in the application of steam to cultivation, which have yet been made in the three kingdoms, were carried out at the Marquess of Tweeddale's, near Haddington.

In the county of Haddington alone, which contains not quite 200,000 acres, or scarcely the extent of one of our smallest French arrondissements, there were, in 1853, 185 steam-engines employed for agricultural purposes, of an average power of six horses each, being nearly one for every 1000 acres—besides eighty-one water-mills.

In former times the lands of a farm in the Lothians, as well as other parts of Scotland, used to be divided into what were called in-field and out-field. The out-field portion remained quite in a state of nature, and was used as pasture; the in-field, on the other hand, produced corn crops uninterruptedly, barley and oats in succession. A worse system can scarcely be imagined. Fallows are an improvement on this barbarous practice, and were introduced simultaneously with wheat-cultivation in 1725–50. The principal merit of their introduction is attributed to the sixth Earl of Haddington, who had seen their good effects in England. Thus we see how much has been done in a short space of time. If the point now reached is the highest that at present exists, the starting-point was certainly the lowest of any.

All the Lothian farms are worth visiting; but I will take only one as an example—that of Mr John Dickson, a few miles out of Edinburgh, composed of what was formerly three farms. It contains five hundred Scotch acres,* and is let at £5 per acre, or £2500. In size this farm is an exception, there being few such in this part of the Lowlands. Those around it are in general not so large, but the methods practised are the same on all; and some of them are let even higher. Notwithstanding these enormous rents, the Lothian farmers make a good business of it. They have almost all excellent houses; and whatever may be the national character for frugality, they live at least as well as many of our proprietors, even of the higher class. Wages, as usual, profit by the general state of prosperity; they are paid half in money, and the rest in kind, amounting together to from 1s. 8d. to 2s. per day.

* A Scotch acre is equal to 51 *ares* 41 *centiares* = 1¼ (or 1.27083) imperial acres.

In order to make up 1,200,000 acres, I include, with the Lothians proper, all the low country along the coast from Berwick to Dundee, not only on the south, but also on the north of the Firth of Forth, and also the Carse of Gowrie near Perth. This is about one-fifteenth of the whole area of Scotland, and less than one-seventh of the Lowlands. We have already observed that an equal extent is covered by the Border mountains. The remaining seven million acres of the Lowlands form the intermediate region, which is neither so rich as the Lothians, nor as rugged as the Borders. Their average rent is about 8s. per acre; and cattle-rearing is the chief purpose to which they are devoted.

Of these, in the first place, a portion is occupied by that distinct district which has received the name of Galloway—the way of the Gauls or Celts—because forming, as it does, a peninsula on the south-west of Scotland, it stretches forward, as it were, towards Wales and Ireland, in anticipation of the migrations of Celts which have been always coming over from these quarters. Galloway includes the whole of the counties of Wigtown and Kirkcudbright, and a portion of those of Ayr and Dumfries. The surface is broken by what the English call hills—that is to say, something between mountainous and undulating country. The climate is extremely wet, like that of Cumberland, which is only separated from Galloway by a firth. The soil produces an abundant natural grass, which is superior to that of the mountains in the neighbourhood. There are a few grain-farms; but farming, properly speaking, is rather on the decline, on account of the preference given to cattle.* Roots and

* We believe, as is the case in other parts of the country, it will be found that the greater attention to the improvement and increase of stock in Galloway has rather tended to materially improve and extend the general cultivation of the land.-- J. D.

forage crops are cultivated for the winter food of these animals; during summer they are turned out upon the pastures.

The primitive race of Galloway cattle is small, without horns, very hardy, and affording meat of the best description. An export of these excellent cattle began at the time of the union of the two kingdoms, and this has been increasing for the last 150 years; but a change, similar to that already noticed in districts of the same kind in England, has been going on for some time. The Galloway farmers had confined themselves to the rearing of stock, which they sold at two or three years old, and which were sent chiefly to Norfolk to be fattened. But since railroads have established more direct communication with the markets of consumption, the pastures, by drainage and other means, have been improved, and winter food has been increased by means of special crops, so that cattle are now fattened on the spot. The short-horned breed, which almost never fails where skill and the means of fattening are combined with care in the breeding, is being rapidly propagated, and tends to take the place of, or at least seriously to interfere with, the native breed. The quality of the meat will not be improved, but the quantity, to which more importance is attached, will be considerably increased. Another occupation, that of dairy-farming, is on the increase in Galloway, where hitherto, notwithstanding the proximity of Ayrshire, it was little known. The farm of Baldoon, under Mr Caird, author of the *Letters upon English Agriculture*, is especially worthy of notice, and offers one of the best models of a well-managed dairy of one hundred cows.

At the end of the last century, Ayrshire, which borders on Galloway, was still in a most deplorable con-

dition. "There was scarcely a road which was passable in the whole country," says a local writer; "everywhere the cottages were built of mud and thatched with straw, the fire in the centre, with an opening in the roof to serve as a chimney, and surrounded with a dunghill, while the land was covered with all sorts of weeds. No green crops nor sown grasses, nor even carts, were to be seen. The only vegetable cultivated consisted of a few Scotch cabbages, which, with milk and oatmeal, formed all the food of the population. Successive crops of oats were taken off the same field as long as it continued to produce anything beyond the seed sown, after which it remained in a state of absolute sterility, until it was again fit for producing another miserable crop. *The rent was usually paid in kind, under the name of half-fruits.* The cattle were famished in winter; and when spring arrived, could scarcely rise without assistance. There was not a farmer with money sufficient to improve this state of things, and proprietors had not the means either." Might we not almost fancy we were reading a description of one of our poorest and most remote provinces, where a bad state of *métayage* still reigned, and where escape from the common wretchedness seemed impossible?

The Ayrshire country now ranks among the most flourishing districts of Great Britain. It is there where that grand innovation in English agriculture—the distribution of liquid manure by means of subterranean pipes—was originally tried upon a large scale, and where we find the small farm of Cunning Park, the present wonder of the United Kingdom. This radical change has all been effected in the space of sixty years. To be sure, the district is close to Glasgow; this is the great secret of it all. Like the English, the Scotch con-

sume a great deal of milk in all its forms. The increasing demand for dairy produce has created the fine breed of Ayrshire cows—probably just our Brittany race improved—and has changed those ancient heaths into profitable pastures. Dunlop cheese—almost the only kind of Scotch cheese which has any reputation—is made from the Ayrshire milk. In the space of a century, the rent of land in the county has increased tenfold. One will cease to wonder at this, when it is stated that milk in Glasgow is sold at 3d. per quart, and butter at 1s. 2d. per lb.

The upper part of the Clyde Valley—or, as it is called, Clydesdale—is remarkable for another production, which also owes its origin to the commerce and industry of Glasgow *—namely, a breed of very powerful draught-horses, well adapted for heavy loads, such as are required for the traffic from the collieries in the district, and for the trade of the port, which, after London and Liverpool, is the most active in Great Britain.

Finally, the north part of the Lowlands, comprising the low grounds of the counties of Forfar, Kincardine, Aberdeen, Banff, Elgin, Nairn, and Caithness, and which remained for a long time very backward, because of the unfavourable nature of the climate and greater distance from markets, is, in its turn, making great progress, since railways have reached it, and now unite Aberdeen to London by way of Edinburgh. The two principal towns in the district, Aberdeen and Dundee, have each a population of about seventy thousand, and carry on several

* The Clydesdale breed of horses certainly dates earlier than the rise of the commerce of Glasgow. It is said to owe its origin to one of the Dukes of Hamilton, who, in the seventeenth century, introduced stallions from Flanders, which were used to cross mares selected from the best Lanarkshire breed. No doubt it has been much encouraged by an increasing demand in the immediate neighbourhood.—J. D.

prosperous trades. Salmon-fishing in the rivers, and the North-Sea herring fishery, are great sources of profit to them. The two most southern counties, Forfar and Kincardine, are the furthest advanced in agriculture, and almost rival the county of Ayr.* Their prosperity is due, in a great measure, to the Angus breed of polled black cattle, which has been skilfully improved by the native breeders upon the Bakewell principles,† and has as great a name for its beef as the Ayrshire for milk; nor does it in this respect bear an unfavourable comparison with the best of the English breeds—the Durham not excepted.

The further we go north, richness decreases; but draining, the cultivation of turnips and forage crops, extra manures, such as bones and guano, subsoil-ploughing, and liming, everywhere convert frightful mosses and barren rocks into good land. One might almost call it a second creation. Every day this part of Scotland is rapidly increasing its production of meat and milk. Oats and barley follow the movement, although at a distance; and wheat dares to show itself in the gloomy and cold county of Caithness—the most northerly of all, where at one time myriads of sea-fowl were almost the sole occupants.‡

In one of his interesting agricultural excursions, M. de Gourcy mentions an enterprising Englishman, Mr Mactier, who, after having realised a fortune in the East Indies, purchased a property of twenty-two thousand acres from

* We think it will be found that the system of agriculture, in the lowlands of these counties generally, is much superior upon the whole to that of Ayrshire.—J. D.

† The first to carry these principles out in application to the Angus breed, was the well-known Hugh Watson of Keillor, who still maintains a superiority in this class of cattle.—J. D.

‡ It is evident M. Lavergne's happier experience leads him to regard with too great asperity the influence of our northern climate; and hence the above statement scarcely conveys a correct impression of the wonderful improvements lately effected in the North. Cereals of all descriptions, of superior quality, are abundantly produced along the whole north-eastern coast of Scotland, and exported to some extent; and the wheats of Ross-shire and Caithness vie with those of the Lothians.—J. D.

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the Duke of Gordon, in Aberdeenshire, which was almost entirely in a state of nature. The price paid was nearly £120,000; and he is laying out upon it, in improvements of all sorts, £25 per acre, or five times its original cost. These operations consist principally of subsoil-ploughing. The property being covered with granite rocks, these are blasted and removed. The ground, after being thus cleared, is levelled, drained, and limed, and laid out in farms of about four hundred acres each. These farms, it is stated, are let on nineteen years' leases, at the rate of 5 per cent on the money expended upon them. The whole operation, when finished, will absorb between £600,000 and £800,000. This is the scale upon which agricultural undertakings are sometimes conducted. English capital readily finds its way to Scotland, because of its being a newer country than England.

Even applying the 20 per cent reduction to the Scotch prices, it will be seen that the gross production of the Lowlands gives, in the aggregate, about 100 francs per hectare, divided as follows :—

Proprietor's rent,	30	francs	per hectare, or	10s.	per acre.
Farmer's profit,	25	„	„	8s.	„
Taxes,*	3	„	„	1s.	„
Incidental expenses,	17	„	„	6s.	„
Wages,	25	„	„	8s.	„
	100	„	„	33s.	„

I have already stated that the average gross production of the lands in France may also be reckoned at about 100 francs, notwithstanding our immense superiority in both soil and climate. Rents also may be about the same, but the remainder is very differently divided. Owing to the superabundance of hands and limited

* Taxes in the Highlands—that is to say, in the other half of Scotland—are very insignificant, which doubles the portion to be allotted to the Lowlands.

capital, wages with us absorb one-half, in place of a fourth, of the gross produce; so that all that remains for the farmers' profit and incidental expenses, or the most productive portion, is only a third of what accrues to these in Scotland. The profit, which in France is about a tenth of the gross produce, and one-third of the rent, amounts in Scotland to a fourth of the gross produce, and four-fifths of the rent. In England the gross average production is double, and the division proportionately about the same, except that taxes in Scotland being very much less, the farmers' portion profits by almost the whole difference.

The greatest superiority of the Scotch rural economy consists in the smallness of the number of its labourers. In France, as we have already observed, the rural population amounts to about sixteen per one hundred acres, and in England to twelve; but in the Lowlands it is only five, for an average production at least equal to that of France, and to one-half that of England. This proportion is probably the lowest in Europe; and still it will decrease—for production continues to increase, whilst the rural population remains stationary, or nearly so.

There were formerly in the Lowlands, as everywhere else throughout Scotland, a great many *cottiers* or *crofters*,—small farmers who worked a few acres after a miserable fashion, like our *métayers*, under tacksmen or middlemen—that is, stewards or bailiffs, who managed for their masters' account. All these cottiers have disappeared; some have become workmen in the mines or manufactories, others are farmers, only a few are common day-labourers. The average size of farms has increased, without being yet very great, since it does not exceed one hundred and fifty to two hundred acres; and the farmers themselves form one-half of the rural population,

while only the other half is composed of labourers and servants. Even in the second half, servants, paid by the year, and living in the house of the master* by whom they are employed, form by far the greater number. The day-labourers, properly so called, make rather the exception than the rule.

It appears to me that this system is preferable to that in England, where the number who live solely upon day-wages is still too numerous; and for us in France, it is easier to imitate the Scotch than the English system. We have, besides, an element which is wanting in Scotland, and which I maintain is useful to a certain extent—small property. With this, provided it be not pushed too far, and that the farming be healthy in other respects, a better combination still may be attained.

For the moment, it is the Scotch system which is, in my opinion, the better of the two, and that notwithstanding the want to which I have just alluded. But if they have not there the good element of small property, neither have they the bad. The Scotch farmers, with more intelligence than any other of the same class, are careful to undertake only what they are in a condition to do well. In that country not only are they not ambitious to become proprietors, when they have only capital sufficient to be farmers, but they take care not to rent a hundred acres when they have capital only sufficient to work fifty. They have the sense to live rather below than above their income; and such as with us would pretend to be gentlemen, do not mind putting their hand to the plough. They prefer in everything realities to appearances. That unfortunate false pride which finds so many victims in France, has disappeared before the natural good sense of the Scotch. A trip to Scotland would be no less useful

* Or rather supported from the produce of the farm in separate houses.—J. D.

in this respect, as well as in many others, to our small and middling proprietors, than to our large.

Scotland, moreover, has long ago experienced a revolution, which has not taken place yet in France, and which even in England has not been carried to the same extent—namely, the doing away with commons. Nothing can be done on a large scale, in the way of a good distribution of labour and comfort, so long as an important part of the soil remains necessarily in an uncultivated state, serving only to foster misery and idleness. Let portions be retained here and there for public walks, as is the case near London. To this there can be no objection. But there must not be too many of them. Commons still occupy a twentieth part of our territory. The extent in England is greatly less; and, during the last fifty years especially, acts for enclosure have happily multiplied. About two millions of acres, during that time, have been allotted, enclosed, and cultivated. But there it requires a special act for each common; while in Scotland the simple request of the parties interested is all that is necessary. The Act authorising this is dated in 1695, and is one of the last and best passed by the Scotch Parliament. It has been justly remarked that, had a like law been passed at the same period by the English Parliament, agriculture in England would have made greater progress.

Since 1695 the Scotch commons have successively been added to property, especially in the Lowlands. All that were capable of cultivation are now reclaimed; and even the non-arable lands are the object of an intelligent and profitable system of working. Looking back two or three centuries, we find nearly the same rural organisation existing over the whole of Europe; only, since then, we have severally more or less emerged from our primi-

tive barbarism. That state of commonality which still exists among the peasantry of Russia, once existed everywhere, and has everywhere more or less receded before civilisation.

Population has not increased over the whole extent of the Lowlands to the degree it has in the counties of Lanark and Renfrew. If in some counties, as Ayr and Edinburgh, it has trebled, in many others, even the richest, such as Haddington and Linlithgow, which form part of the Lothians, it has progressed very slowly. It has doubled, upon the whole, however, and is now a little above one head per five acres, or equivalent to Wales, and some departments in the centre of France—those of Haute Vienne, Creuse, Dordogne, and Corrèze. This increase of population is therefore far from being in correspondence with the increase of wealth. Within the same period the population of England has trebled, and that of Ireland quadrupled.

Even upon this nice question of population, the Scotch possess an instinctive knowledge as great as the first economists. Wherever a permanent demand for labour arises, there population increases to meet it. But this demand does not equally arise everywhere; and in purely agricultural districts the tendency is rather the other way. Thus Scotland is sheltered from those troubles and sufferings which excess of population produces. She has never any ground to fear as to her subsistence, since she freely exports much of her agricultural produce; and the limited number, as well as the moderate habits of her consumers, admit of a large part of her receipts being turned into capital.

We shall presently see in the Highlands a much more rigorous application of the same principle.

CHAPTER XXII.

THE HIGHLANDS.

The Highlands comprise the four large counties of Argyll, Inverness, Ross, and Sutherland, and the greater part of Perth, Aberdeen, Banff, Elgin, and Nairn. Adding to these the Hebrides, Shetlands, and other islands, this is at least one-half of Scotland.

I have already remarked upon the appearance presented by these desolate regions, almost destitute of trees, and with scarcely even heather;—everywhere steep and naked rocks, streams of water of all sizes, lakes, falls, foaming torrents, immense mosses, perpetual snows and rain, and violent winds from the North Sea. It seems as if rural economy could have nothing to do with such a country. The Highlands have had their share, however, of the change which is being effected in Scotland. Their share, too, has not been the least, for these mountains have been the scene of one of the most complete revolutions of this revolutionary age. What has taken place, has been altogether exceptional in its character, and deserves a special notice; the more so, as the legality and utility of such a radical change has been strongly debated. The arguments raised on the subject have left wrong impressions on the minds of many, which it is important should be rectified. The Highlands were the scene of that systematic depopulation which made such a noise in Europe

thirty years ago. M. de Sismondi, among others, with the most praiseworthy but short-sighted intentions, contributed in no small degree to excite public animadversion against this measure; which, admitting that it was too violently executed, has undoubtedly produced beneficial results.

The Highlands, in former times, like all inaccessible mountain countries, were the natural fastnesses of a warlike people. They differed in all respects from the rest of the world—costume, language, race, and manners. Gaelic was the only language, the kilt and plaid the only dress. Poetry and romance have immortalised this small people. Habituated to warfare, the state of society among them was not unlike that of the Arab tribes. Each great family or clan yielded obedience to a hereditary chief. The territory of each clan being looked upon almost as common property, under rule of the chief, each individual took what he wanted, upon the simple condition that he paid a small fine in kind, and rendered personal military service. Their wretched fields produced very indifferent oats; herds of cattle and sheep, as wild as their owners, supplied a little wool, milk, and flesh. For the rest, the mountaineers lived by hunting and fishing, but for the most part by plunder. From time to time they made predatory incursions upon the Lowlands; and when not united in one large body on such occasions, they separated and pillaged, each upon his own account.

Up to the time of the Battle of Culloden in 1746, the chieftains thought only of increasing the number of their followers. Their importance consisted, not in the amount of their revenues, but in the numerical strength of their armed bands. Although the agricultural and social state of the middle ages had long passed away elsewhere, it was found still existing in these retreats.

All, however, became changed after the final expulsion of the Stuarts. Ideas and requirements belonging to a new state of society sprang up even in the most remote glens, originating, in the first instance, with the chiefs. During the previous half-century, the Scotch nobility had been acquiring some insight into what was going on in other parts of the world. Some of them had been at the English court, others had visited the court of France. These had blushed for their proverbial poverty, and found only partial consolation in the consciousness of their military power, for what they wanted in wealth, refinement, and comfort. The natural course of events, which is continually modifying human institutions, whether good or bad, daily increased these secret feelings. Deprived of their feudal independence, the Highland chiefs sought to increase their revenues, in order to make another kind of display. Although they might not have chosen habits of luxury, which forced them to this, they would have been led to adopt them solely by the progress of a growing civilisation.

Now, the only way by which they could increase their means was to turn their estates to account; and to this two obstacles presented themselves—first, the asperity of the soil and climate; and secondly, the inveterate wildness of the people. They were not long, however, in discovering that one of these difficulties could be overcome; for there is no soil so unkind that will not yield something of a net produce; but the people were more untamable than nature itself. The common vassals had not the same stimulus for increasing their labour; the paternal hut satisfied them, and they never dreamt of any better style of living. Wherefore, then, should they change their habits? By the sweat of their brow to make the earth bring forth fruits to be reaped by others!

Better the proud poverty of their heather and their pristine idleness.

There would have been some hope of being able to overcome these impediments, over which time, in all feudal countries, had triumphed, had there not been in this case a peculiar difficulty which rendered success absolutely impossible. Although scanty in numbers, as compared to the extent of their country, the Highlands counting no more than from two hundred and fifty to three hundred thousand inhabitants upon nearly ten millions of acres, population was still too dense for the productive powers of the soil. However inured to fasting, the Highlanders were decimated by famines, and it frequently happened that they bled their half-starved cattle in order to feed upon the blood. Although the population had been ever so laborious, it could only have succeeded, while remaining thus numerous, in feeding itself a little better, without saving anything; and if in some parts a better culture appeared practicable, it was of no use attempting this while the neighbouring districts were in possession of the ancient clans; for neither crop nor cattle could escape the plunder which old habits sanctioned.

Thus it was that the Highland chiefs came gradually to the conclusion that it was impossible to make anything of their mountains but by depopulating them. From that time they have not ceased endeavouring, first by indirect means, and then openly and by force, to diminish that population which their ancestors, for purposes of warfare, had multiplied.

The English government, with some tact, encouraged these proceedings. They began by holding out attractions to the chiefs to come to London, in order to wear off, by degrees, their national feelings, and to instil into them new ideas and habits. Then, after persuading them that the

ancient organisation of the Highlands was incompatible with a state of peace and industry, the government aided them in accomplishing the difficult transition. To furnish an outlet for the military portion of the population, family regiments were raised, each composed of men from the same clan, and commanded by their hereditary chiefs in the pay of the State. These regiments bravely maintained the honour of their new colours, and, in the wars of the Empire especially, the Highlanders, well known by their singular costume, were considered the flower of the English army. Those families, at the same time, who consented, were removed from their mountains to the low country, and emigration to America was set on foot for the most refractory.

Up to the end of the eighteenth century these measures had been executed with forbearance ; but the great agricultural revolution of Arthur Young gave a more decided turn to the movement. More than anywhere else, the advantage of large fields for improvement in these sterile mountains was evident. The feudal system, in which formerly the power of the Gaelic race consisted, was now the very thing which caused its destruction. The territory of a clan being considered the property of the chief, the Highlands were divided into only a few extensive domains. The chief of each clan now set about hunting out his subjects. Many of these unfortunate people emigrated to Canada, others sought employment in the Lowlands ; while, upon the ruins of their cabins, large sheep-farms arose. In 1808, Lord Selkirk, a Scotch nobleman, published the theory of this depopulation. It was then, and is still, called *clearing an estate.*

Just at that time England and Europe were reading with delight the works of Walter Scott. His first poem, the *Lay of the Last Minstrel,* appeared in 1805, and his

first novel of Waverley in 1814. In these wonderful fictions the old Highlander of ancient Scotland was depicted to the life, with his tartan plaid and formidable claymore. People's minds were all filled with visions of that land of poesy, and imagined the shores of its lakes, its mountain heather, its deep glens and caves, peopled with all those loved fancies which the great novelist's imagination conjured up; and at the very moment when genius threw so much light upon the picture, what remained of these people were being persecuted and expelled for the aggrandisement apparently of a few rich proprietors.

On all sides an outcry was raised. The absolute right to the land, claimed by these mere feudal chiefs, was disputed. It was contended that they were nothing more than suzerains, and that the land belonged as much to their vassals as to themselves. In many respects this observation might be just. Taking tradition only as the rule, it might have been received; but in the struggle between the present and future against the past, history must needs be in the wrong. The utility of the thing was evident, if the right was not completely established. Deeming it out of the question to leave the labouring population of the Lowlands exposed to such a dangerous neighbourhood, the government interposed on behalf of public safety. Thanks to the help thus afforded, the depopulation was accomplished, and by degrees the Highlands have been gradually deprived of the greater portion of their wild inhabitants.

Nowhere has the experiment been tested on so large a scale as in Sutherlandshire, which forms the north-west extremity of Great Britain. It is a wild, rugged country, where the mosses are more numerous, and the rocks more bare, than in the adjacent districts, and it is not even more picturesque on account of its desolation. Situated

in the same latitude as Sweden and Norway, it is subject to a like severity of climate, rendered still more severe by the height of its mountains. A narrow strip of good soil extends along the coast, especially towards the south. There is a want of it everywhere else; but though it existed, the prevalence of cold and storms would be sufficient to render cultivation almost impossible.* There, isolated from the rest of the world, dwelt the largest and most unmixed of the Gaelic tribes. A great chieftain, called Mhoir-Fhear-Chattaibh, or the Great Man of the South, in allusion to his contests with the Danish pirates who infested the Caithness coasts to the north, was formerly the head of this clan. The population of the country was not great, owing to the want of food, and they were very badly off. Upon an area of about eight hundred thousand acres, fifteen thousand men, women, and children, existed in a condition little better than that of beasts.

At the time of the military organisation of the clans, Sutherlandshire raised the 93d regiment of the line. In the early part of the present century, the Countess of Sutherland, sole descendant of the *Great Man of the South*, having become Marchioness of Stafford by marriage with a wealthy English nobleman, undertook to

* This rugged picture, conveying an impression of general barrenness, is, it will be seen, considerably softened by what immediately follows, when M. Lavergne comes to treat of the improvements which have recently taken place in Sutherland. After all, it is with the latitude of the very southern parts of Norway and Sweden that this county ranges, and we know that the severity of its climate is much mitigated by its insular situation; indeed, we have no reason to think its summers are inferior, especially on the eastern coast, to those of the Lothians, though they are undoubtedly a little shorter. There is a considerable breadth of very useful land, in fine herbage, in the extensive valleys by which the mountain ranges are intersected; and the statistical returns, obtained from Sutherlandshire last year, exhibit a total of upwards of twenty-two thousand acres of arable land, nearly four thousand five hundred of which were in green crops, and upwards of ten thousand five hundred in grain of different kinds.—J. D.

strike the first blow. She ordered all her vassals to quit the interior of the country, at the same time offering to establish them on the sea-coast, where they might become sailors, fishermen, labourers, and even cultivators of the soil, since the soil and climate there offered greater resources. Those who refused had no alternative but emigration to America. This measure was carried out between 1810 and 1820. Only thirty years have elapsed since the whole thing was finished. Three thousand families were forced to quit the country of their fathers, and were transplanted into the new villages upon the coast. When resistance was shown, the agents of the Marchioness demolished their miserable habitations, and in some instances, in order to effect this more speedily, the huts were set on fire.

As soon as what was going on in Sutherlandshire became known in England and in Europe, the irritation, which similar proceedings had already excited, reached its height. The maledictions which rose from the burning embers of the cottages were echoed with redoubled force, until Lord and Lady Stafford, in 1820, felt themselves called upon to publish a justification of their conduct; and this they did through their chief agent, Mr James Loch.

According to Mr Loch, the heiress of the Earls of Sutherland had done her vassals a real service in obliging them to leave a country where they were subjected to nothing but misery. In place of the mud cabins in which they were huddled together upon their native mountains, she had prepared more commodious dwellings for them under a less inclement sky. In place of those pastures, immense no doubt, but wholly uncultivated, where their scanty flocks were dying of hunger, she had provided more fertile land, which was, besides, open to the sea. The people had not been driven out,

but only displaced for their own good. If some of them, blinded by prejudice, had preferred emigration, the majority had gratefully accepted the change; while those whom it had been found necessary to expel by force were but the exceptions.

In fact, as Mr Loch always contended, time alone would show the wholesome results of these measures. In 1820 the new villages were already infinitely superior to the old ones. The Marchioness had spent considerable sums in opening up roads in every direction; throwing bridges across streams, and even arms of the sea; constructing inns and posting establishments; and in rendering the small harbours of the coast more accessible and safe. This country, which ten years previously was absolutely closed, became henceforth approachable both by sea and land; coaches ran through it from one end to the other, and numbers of vessels loaded and discharged upon these formerly deserted coasts. The outlay upon the harbour and works at Helmsdale alone amounted to more than £16,000. This once unsafe inlet, where not a vessel touched before 1814, became, five years afterwards, the seat of a trade employing some thousands of tons of shipping. At first the Marchioness's agents had to import at considerable expense all materials required for their works—lime from Sunderland, coal from Newcastle, and slates from Aberdeen; and to bring, besides, their own engineers—masons, quarrymen, sailors, and artificers, even such as bakers, cartwrights, and joiners, for none of these existed previously on the place. At the time Mr Loch wrote, only a few of these strangers remained: the native population had learned from them enough to provide for their own necessities. These once barbarous people had become, in the course of a few

years, clever workmen, good seamen, and hardy miners. The Marchioness caused to be built, at her own expense, churches and schools ; and it only required a very short time to complete the work of regeneration.

At the same time, Mr Loch had no difficulty in proving that, in point of rural production, properly so called, the operation was a successful one. The depopulated lands were divided into twenty-nine large sheep-farms, averaging twenty-five thousand acres each. Cheviot rams and ewes of the improved breed had been imported in large numbers, and were added to the native black-faced race. The heather was burned, mosses were drained by open ditches, and the water was collected and distributed along the mountains by means of artificial canals. Owing to these judicious proceedings, a fine and close natural grass covered the highest summits, just as in the lower valleys. This natural grass, growing upon a thin bed of soil, and which could not have borne the tread of heavier animals, was improved, and grew every day thicker from the manuring of the sheep. At this time it was estimated that the number of sheep fed upon the Sutherland mountains amounted to 118,000 cheviots, and 13,000 black-faced. The export of wool rose to 415,000 lb. annually, and was sold to the Yorkshire manufacturers at the Inverness market ; and 30,000 sheep were delivered to the south-country farmers, to be fattened for market. These products, already much greater than anything formerly obtained—for that was almost nothing—gave promise of rapid increase.

The coast farmers, in their turn, finding themselves placed in better circumstances, had, at the instigation and with the assistance of their masters, adopted improved methods of cultivation ; and fine fields of barley

and wheat, turnips sown in drill, and artificial grasses, took the place of the brambles so dear to the ancient inhabitants.

All Mr Loch's hopes have been realised. Time has brought all his prognostications to pass. The necessary capital for effecting all this could never have been found in Sutherlandshire. It required the marriage of the heiress of the county with a very wealthy man, who was willing to devote part of his fortune to the improvement of his wife's patrimony. In acknowledgment of this revolution, the English government raised Sutherland to a duchy; and, by a great sacrifice, the Marquess of Stafford saw the noble name of his family merged in that which he helped to restore. The son of the Countess of Sutherland and Marquess of Stafford now enjoys the title of Duke of Sutherland. From these eight hundred thousand acres this nobleman derives an income of £40,000, and that, it is said, is only a fifth of his immense fortune. The rest is derived from his paternal estates in the counties of Stafford and Salop, which have also been greatly improved, but in another way, owing to their different character.

When the present Duke came into possession of his Highland estates in 1840, he was received with marks of attachment on all hands. The remembrance of old struggles was effaced, the smoke of past burnings had for ever passed away. All the farmers who had taken leases, whether in the depopulated mountain districts of the interior, or on the uncultivated moorlands upon the coast, had made money; and Mr Loch, the factor, had become a member of Parliament. The population, which had increased from fifteen thousand to twenty thousand, and were still congregated along the coast, no longer thought of leaving it. There the bad lands, cleared of

underwood and stones at great expense, and thoroughly improved by means of sea-weed and all kinds of artificial manure, were giving a rental of as much as 30s. per acre. Harbours, mines, fisheries, all had succeeded. From his lofty feudal tower of Dunrobin, which overlooks this part of the coast, the descendant of the Mhoir-Fhear-Chattaibhs encouraged a scene of active industry, which his ancestors never dreamt of.

In the interior of the country the old race of black-faced sheep had almost disappeared, and were succeeded mostly by the cheviot. Now two hundred thousand sheep are pastured on a surface which formerly fed only a fourth of that number. What an admirable property this is in the sheep, of adapting itself to all sorts of soil and climate! The same animal, which is the chief wealth of the Arab on the sandy deserts of Saharah, enables us to turn to profitable account the rocks and peat-mosses of the extreme north! M. de Gourcy says: —"One cannot help being surprised, in passing through these solitary regions, to find them covered with splendid sheep, giving every year 5 lb. of pretty fair wool, and, with no other food than what they find there summer and winter, weighing alive, at three years and a half, two hundred lb. English." The hills serve for summer pasturage, and the glens or valleys for the winter. During the long nights even, the flocks remain exposed to all weathers, with no other shelter than what a few birch trees afford. The only protection they receive against the extreme wet is an application or smearing of tar and butter in the month of October.

As for human inhabitants, there are none. If the sound of the bagpipe is heard among the rocks, it is no longer the gathering-call of warlike mountaineers, but the more peaceful amusement of a shepherd, who, in

place of war and pillage, devotes his time to the care of sheep, and receives wages from a neighbouring farmer. He scarcely knows anything of the warlike history of his clan; but, instead, can tell you if it has been a good lambing season, and how wool is selling. This is all that remains of an extinct race. One of these shepherds can look after five hundred sheep. There may be four hundred or five hundred such upon these eight hundred thousand acres.

The history of Sutherlandshire is more or less that of the whole Highlands. Wherever it has been practicable to displace the old population, they have been succeeded by sheep. Where the soil is a little better, and the depopulation therefore less complete, a few oats and turnips are cultivated round the farm-houses; and, in addition to the sheep, we find a few horned cattle. These cattle, well known under the name of West Highlanders, are just the old race of the country, which, through care and attention, have acquired a fulness of flesh and an uncommon aptitude for fattening. The cattle-stealers of *Waverley* would now scarcely recognise these animals as the progeny of the small beasts they used to drive before them on returning from their marauding excursions —hundreds of which they used to hide in their caves. One will now weigh as much as five or six of former days.

It was Archibald, Duke of Argyll, who, about the middle of the last century, began to improve this breed, which has now reached its climax. As shaggy as a bear, and of a black or brown colour, they have still, at first sight, a wild look, quite in keeping with the locality from whence they come. But their leisurely gait and quiet eye soon show that they also have lost their former wildness, and that they have little in common with their fierce brethren of Andalusia, trained for the fight. No

change has been made in their general mode of life. Like the sheep, they never enter a shed, but live, night and day, summer and winter, in the open air, and obtain their only food upon the mountains, where the hand of man has never scattered a seed.

The British, as a nation, are rough-mannered. They do things harshly, and often take the wrong way of doing them when really their ultimate object is right. The heirs of the large Scotch fiefs evidently went too far in employing force to reduce their vassals. It would have been better had they trusted to time—which soon passes—for the change to have taken place of its own accord. Even although constraint had been necessary, it was scarcely advisable to have exercised it towards a people whose devotion to them amounted even to fanaticism. With this exception, the effect of the displacement has been beneficial, useful, and well ordered, both in an agricultural and political point of view. This has been abundantly proved, after fifty years' experience. The Scotch themselves allow that, if there exists any ground for regret, it is that the operation has not everywhere been as complete as in Sutherlandshire. A sufficient justification for the expulsion of their predecessors appears in the fact that, in those parts where the Highlanders still remain too numerously congregated, they are in a state of misery, and the force of circumstances must no doubt cause them gradually to disappear.

In his entire condemnation of what took place in the Highlands, M. de Sismondi has fallen into several errors. He has spoken of Sutherlandshire as a country in the ordinary state of fertility and civilisation ; and what he regarded as an abuse of property, has made him forget the insufficiency of production and the danger of a state of barbarism. When a soil and climate are not suffi-

ciently productive conveniently to maintain a human population, is it not rather to be desired that the people remove elsewhere? It matters little whether a portion of the produce is collected by the proprietor in the shape of rent, or whether all the production goes to be divided among those who till the ground: the proportion may alter, but the real difficulty of the case remains. Supposing the Highlanders had been recognised as proprietors of their native soil, a change of locality would still, under the circumstances, have been necessary for the majority.

This first question being disposed of, the second, that of rent, next comes.* Is it advantageous, is it legitimate, that such a country should produce a rent? I do not hesitate to answer that it is. Even the worst lands make no exception to the general rule. All land, to be really useful to the community, ought to produce something over and above the expenses of production. This surplus is for the support of those who do not till the land; that is to say, for those who give themselves up to industrial and commercial pursuits, and to the arts and sciences. Every country which has no net produce is condemned to barbarism. Although impelled altogether by personal interest, the heads of the Scotch clans have been instrumental in carrying out that great social law which makes the payment of rent the very principle of civilisation. Without rent there is no division of labour; no wealth, no comfort, no intellectual development. Besides, we almost invariably find that when the net produce is increased, so also is the gross.

* By rent, I mean what is generally understood in France by the term—the net revenue of the proprietor. Another meaning for it is frequently implied, especially in the writings of English economists, altogether ideal, invented by Ricardo, and which has given rise to interminable discussions. I have been careful to avoid giving it any other than its original meaning throughout this essay. See the examination of Ricardo's theory in my *Cours d'Economie Rurale.*

The Highlands produce infinitely more than they did a century ago—not only in respect to rent, but in everything.

An old Highlander, relating in rather an odd way the misfortunes of his race, observed :—" When I was young, a Highland gentleman measured his importance by the number of men he could maintain upon his land ; some time after that, the question came to be as to the number of cattle ; but now it is the quantity of sheep he has. I suppose our children will be inquiring how many rats and mice an estate can produce." This, of course, is a joke ; but still it is not fair. It is enough, in reply, to state, that the population of the Highlands, which was at most three hundred thousand in 1750, is now six hundred thousand ; and that the profits, as well as the wages of this population, have increased much more than the rents, even in the depopulated mountains. But, after all, these mountain districts do not yield more than 1s. per acre to the proprietors. The tenants make about as much, and the common shepherds receive about £40 a-year—ten times more, certainly, than their forefathers ever earned.

It is just the same with the displaced population ; they were starving in the interior of the country for want of profitable occupation, but now they are in prosperous circumstances on the sea-coast, where they can always find remunerative employment. This people, once so formidable to their neighbours, have changed their state of lawlessness for an industrious and steady life. There has, then, been no falling off in work and comfort, as M. de Sismondi alleges, but a marked increase in both.

A somewhat similar revolution took place in England, according to the evidence of all historical docu-

ments, beginning with the reign of Henry VII.; that is to say, immediately after the Wars of the Roses, when some degree of order and security was restored. The feudal system, suitable enough for warlike times, was at that period found to be incompatible with a state of peace. No sooner did the English nobility desire to have fewer armed men and more revenues, than they acted—at the end of the fifteenth century—exactly as the Scotch nobility did two hundred years later; they reduced, as much as possible, the number of their retainers, and replaced them by sheep. During the whole of the succeeding century, this systematic depopulation continued, and especially after the expulsion of the monastic orders, which produced that multitude of vagabonds who infested the rural districts, and caused the establishment of the famous poor-rate. It was only towards the end of Elizabeth's reign that ideas on this subject began to change; because, owing to the increase of the industrial and commercial population, it became necessary to provide more corn for food; and the English nobility had not the same excuse as those of the Highlands at a later period, because the country which they depopulated was infinitely more susceptible of cultivation.

Even Walter Scott, the Bard of the Clans, when, leaving fiction, he turned historian, forcibly recognises the necessity for their dispersion. In his *History of Scotland* he says, "The view which we cast upon the system of clanship, as it existed in the time of the last generation, is like looking upon a Highland prospect, enlivened by the tints of a beautiful summer evening. On such an occasion, the distant hills, lakes, woods, and precipices, are touched by the brilliancy of the atmosphere

with a glow of beauty which is not properly their own, and it requires an exertion to recall to our mind the desolate, barren, and wild character which properly belongs to the objects we look upon. For the same reason, it requires an effort of the understanding to remind us that the system of society under which the Highland clans were governed, although having much in it which awakens both the heart and the fancy, was hostile to liberty, and to the progress both of religious and moral improvement, by placing the happiness, and indeed the whole existence, of tribes at the disposal of individuals whose power of administration was influenced by no restraint saving their own pleasure. Like other men, the heads of the clans were liable to be seduced into the misuse of unlimited authority. The possession of such power by a few men made it always possible for them to erect the standard of civil war in a country otherwise disposed to peace ; and their own bravery and that of their retainers only rendered the case more dangerous, the provocation more easily taken, and their powers of attack and resistance more bloody and desperate. Even in peace the power of ravaging the estates of a neighbour, or of the Lowlands, by letting loose upon them troops of banditti, kennelled like blood-hounds in some obscure valley till their services were required, was giving to every petty chieftain the means of spreading robbery and desolation through the country at pleasure. With whatever sympathy, therefore, we may regard the immediate sufferers, with whatever general regret we may look upon the extinction, by violence, of a state of society which was so much connected with honour, fidelity, and the tenets of romantic chivalry, it is impossible, in sober sense, to wish that it should have con-

tinued, or to say that, in political wisdom, the government of Great Britain ought to have tolerated its longer existence."*

Kennelled like blood-hounds. Nothing was ever expressed more forcibly; and Walter Scott here treats of the moral and political side of the question only: he does not touch at all upon the economy of such a system, which is not less important.

In France we have nothing resembling these freebooter tribes of ancient Scotland, and on the score of public safety we have need of no similar transportation. Still we may derive instruction from the example of the Highlands, inasmuch as they should teach us to consider the condition of some of the rural populations in the most unproductive parts of our own country. May we not also have, on some parts of our territory, a population too dense for the powers of the soil on which they dwell, and who, even with the most assiduous labour, find insufficient food while they remain so numerous? Might it not be desirable for the general good, as well as for the unfortunate people themselves, seeing that they form a part of the great family, to remove a portion, and employ them more usefully elsewhere? Would not this be a double gain, first to the country they leave behind, and then to that in which they would find employment? Would they not themselves be benefited by better wages and greater comfort? We may be thankful that the employment of force in such a case could not happen with us; it would be the result only of a necessity freely recognised by the parties interested;—but may we not prepare the minds of the people beforehand for such an event?

A clearance once effected, everything becomes easy in

* *Tales of a Grandfather*, third series, chap. xxvi.

the Highlands. The mountains there are quite free from wood. This nakedness is referred to several causes, especially to the sea-winds; but all parts of this immense surface are not equally exposed to storms: the destruction of wood is therefore to be attributed, in a great measure, to the same cause which has so completely stripped French Africa, and which is so rapidly destroying every kind of vegetable earth upon our own mountains; namely, the unrestricted grazing of the flocks. As soon as the population left, care was taken to apportion to pasture and forest each their separate ground. Since the Scotch chieftains have become large proprietors, they have undertaken immense plantations. The late Duke of Atholl planted fifteen thousand acres with larch. This splendid forest, now of sixty years' growth, has sprung up with astonishing vigour, covering with its dark mantle the mountains north of the Tay around Dunkeld, and is not among the least of the beauties of that grand scenery. It is doubtful if Baden and the Black Forest are to be compared with it. I am not sure that the forest planted by man does not bear away the palm from the natural forest, the larch against the fir. If woods are out of place in the low country, where the land is fit for producing corn, meat, or wine, they are undoubtedly in their proper place upon steep heights, where nothing else will grow. Besides their own peculiar value, they protect the valleys from the violence of storms, regulate the fall of rains, and, what is not to be overlooked, add to the grandeur of the scenery. The foaming falls of Tay are ten times more beautiful for being clothed with this majestic foliage.

Finally, and this perhaps is the most curious feature in that skilful turning to account of wilderness, there is the extraordinary profit derived from its game. Ptar-

migan, blackcock, all kinds of waterfowl, and especially grouse, breed upon these moors in great plenty: fallow and red deer have also been artificially propagated upon them. Fashion has given great value to these sports. A hill stocked with game lets for £50 for the season. Shooting-lodges, built in the most retired spots, are let, including the right of shooting over the adjacent hills, at £500. What is called a *forest*—that is to say, several thousands of acres, not exactly planted with trees, but reserved for deer to the exclusion of all kinds of cattle—brings an extravagant rent. The large Scotch proprietors, following the example of William the Conqueror, have laid out many of these forests upon their estates. Gentlemen go there at great expense to enjoy the sport of shooting the fleet monarchs of these wilds in their precipitous retreats—expeditions which are all the more attractive from the fatigue imposed and some little danger that attends them, and which revive in these children of the North the wild instincts of their forefathers.

Nothing is more fashionable than Highland sports. The pencil of Landseer, the favourite delineator of British sport, has described under every form its most stirring incidents; and that bustle which, for two or three months in the year, awakens in the slumbering echoes of the rocks something like the gathering of the clans, results in handsome incomes to the proprietors.

Public opinion, which, after much hesitation, at last approved of the expulsion of the Highlanders, has for a long time sanctioned the Scotch deer-forests as the valuable remains of a former state of things now properly abolished. People, however, are beginning to murmur against these last vestiges of ancient feudalism, contending that the deer are too few in number profitably to occupy the vast tracts set apart for them, and that it would

be better to use them for feeding sheep. I can understand such an argument when the question concerns England, where certain wealthy proprietors still persist in keeping waste for their shootings large tracts of land in the middle of populous districts, that might otherwise bear crops; such, for example, is Cannock Chase in Staffordshire, which contains nearly fifteen thousand acres; but in the Highlands of Scotland I can scarcely believe that the loss is very great. A few thousands of sheep more or less would be no great addition to the national food; and then, again, the last remains of savage nature in Great Britain would be gone. Nothing but sheep is rather monotonous; nor are we called upon to give way to a mania. To rob country life of all its poetry, is going rather too far even in the interests of farming; and should we not hesitate before destroying the greatest charm which entices the wealthy out of the towns?

The Highland fishings are no less famous than the shooting grounds. In a country abounding everywhere with streams, fish naturally are plentiful; the salmon especially has given rise to a very large trade. Shortly after the pacification of Scotland, it was a fortune to any one who possessed a fall upon a river. Simond mentions a fishing on the Tay which before 1800 was rented at five guineas a-year, and in 1810 was let for £2000. "It is not because the fish are more plentiful," he says, "but there is more attention paid to catching them, and there are more consumers." So much has been done in this way, that salmon and trout are not found in such quantities as formerly. Of late, however, a new art—artificial fish-breeding—gives fresh hopes. The present Duke of Atholl is one of those who devote great attention to the means for re-stocking the lakes and rivers, and numerous experiments prove the success of the measures employed.

Everything promises that this valuable resource of the Highlands will be preserved, and probably increased, by human art. This is man's proper occupation in such a country; with pastures and forests, it is the only practicable and profitable kind of culture.

That perfect security which the Highlands now enjoy —that dead silence of a land without inhabitants—the rocks, crags, waterfalls, and heather, with their romantic and poetical associations—all combine, despite the dulness of the climate, to give a peculiar charm to a residence among these mountains. Comfortable abodes have taken the place of the huts of the clans. Not only have the old chieftains built themselves castles upon the ruins of the cottages, but wealthy Englishmen have purchased large tracts of territory, and removed their residences thither. There is now scarcely a desirable situation which is not occupied by a modern mansion. The average cost of land is about 30s. per acre, which gives a large extent for little money. The houses stand many miles apart, and the lands belonging to them are occupied solely by sheep and grouse. Notwithstanding the bare and deserted appearance of many of these houses, their interiors present every comfort, which is always an agreeable contrast.

Capital roads, and steamboats on the lakes, give easy access to the most remote places. The general aspect of the country is that of a vast park of many millions of acres, where the greatest of landscape-gardeners has endlessly multiplied the most sublime effects. Thousands of tourists wander over the country during the fine season,—if, to be sure, the summer of that country deserves the name; and this is another source of gain not less profitable than the others, which the "canny" Scotch take good care to profit by.

The finest of the noble residences is Taymouth Castle,

belonging to Lord Breadalbane, situated at the point where the river Tay flows out of the loch of the same name in Perthshire. Lord Breadalbane is a descendant of the chiefs of the clan Campbell, one of the most powerful in the Highlands. His domains extend one hundred English miles, or forty leagues, in length, and reach nearly from sea to sea. The same means of clearance were employed here as elsewhere, and the clan, properly speaking, no longer exists; and in place of the old mansion a regular palace has been built, the splendour of which astonished even the Queen when she paid a visit to Lord Breadalbane. The finely timbered park, through which the bounding waters of the young Tay flow, well stocked with hares, partridges, and pheasants, and studded with plots of flowers, combines with the natural beauties of these wild glens those charms which the most exquisite art alone can give, incompatible as they may seem. It must have required a considerable sum of money thus to have conquered the soil and climate. This the pasturages have supplied, for they are inhabited only by sheep.

I arrived at Taymouth upon a long summer evening by the left shore of Loch Tay, which cannot be less than six leagues in length. Several farms appeared here and there on the banks of this little sea, with their fields of turnips and oats; but on the mountains themselves no trace of man or house was to be seen. Black-faced sheep were grazing on the hill-sides without any one to look after them, and as we passed they gazed at us with their little frightened black faces; West Highland cows, whose shadows were thrown upon the rocks with the last rays of the sun, filled the air with their bellowings at our approach; and just as we reached Kenmore Bridge, we saw under the lofty larches, planted by the father of the present Marquess, some stags, under cover of evening, coming down to

drink in the loch. These peaceful pictures are far preferable to the scenes of blood described by Sir Walter Scott in his *Fair Maid of Perth*, as having taken place on this very spot.

The Shetlands, Hebrides, and other islands which lie scattered along the Highland coasts, have not been visited by civilisation to the same extent; but regular steam communication has now been established with them, and in a few years we may expect to see similar proceedings effect the same results. The island of Lewis, the largest of the Hebrides, containing about three hundred and fifty thousand acres, has been purchased by an enterprising Englishman—Sir James Matheson—who has commenced a series of improvements there, the starting-point of which is the emigration, more or less voluntary, of a large portion of the inhabitants.

CHAPTER XXIII.

IRELAND.

THE agricultural history of Ireland, until within the last few years at least, is as lamentable as those of England and Scotland are brilliant. What was to be the ultimate fate of this unfortunate island was long an unanswered question; now, however, the problem begins to be elucidated, but at what a cost!

Ireland is not wanting in natural resources. Even the English admit that Ireland, in point of soil, is superior to England. The conformation of the country is peculiar; mountains range along nearly the whole extent of its coasts, the interior being a vast plain, and for the most part highly fertile. Ireland contains eight millions of hectares.* Rocks, lakes, and bogs occupy about two millions of these, and two millions more are indifferent land. The remainder—that is to say, about half the country—is rich land, with calcareous subsoil. What better could be conceived? "It is the richest soil I ever saw," says Arthur Young, speaking of counties Limerick and Tipperary; "and such as is applicable to every pur-

* The acreage of Ireland is reckoned at 19,944,209, exclusive of lakes, divided as follows:—

Leinster,	4,749,584	acres.
Munster,	5,835,220	„
Ulster,	5,224,274	„
Connaught,	4,135,131	„ —J. D.

pose you can wish." The climate being damper and milder than in England, extremes of heat and cold are there almost unknown, at least as regards three-fourths of the island. Herbaceous vegetation is luxuriant, and it is not without reason that the clover or shamrock has been adopted as the heraldic emblem of the Emerald Isle, as it is called. The south-west coast enjoys a perpetual spring, owing to the ocean-currents which set in from the tropics. Myrtles there grow in the open air, and the arbutus or strawberry tree is one of the commonest of shrubs.

No country has more natural facilities for water-carriage, interior as well as exterior. Immense inland lakes —as Lough Neagh, with an area of one hundred thousand acres; Lough Corrib, of fifty thousand, and others profusely scattered over the country,—afford unexampled means for transport. The Shannon, the finest river in the British Isles—half river, half lake—extends nearly across the country from east to west, for a distance of two hundred miles, and possesses this great advantage, that, saving a few obstacles which might easily be removed, it is navigable to its source. Other rivers, equally navigable, flow in all directions from different lakes, and form branches of a vast system, which short canals might easily complete. The coast also is everywhere indented with bays and harbours, one of which—Cork—could shelter all the fleets of Europe. The nature of the country is no less favourable to road communication. Ordinary roads and railways are capable of being constructed with less labour and at less expense than in Great Britain.

Notwithstanding these natural advantages, the misery of the Irish has long been proverbial. Four large cities —Dublin, containing 250,000 inhabitants, Cork 100,000, Belfast 80,000, and Limerick 60,000, and situated in

the centre, as it were, of the four faces of the island—constitute the capitals. Dublin especially may justly be considered as one of the finest cities of Europe; its magnificence astonishes a stranger; but the rest of the country contains few large towns, and the fields exhibit a heart-rending poverty, which extends to the suburbs of the large cities. Those harbours, lakes, and rivers, which might carry life into every part of the country, are almost destitute of trade. The gross agricultural production, at least previously to 1847, amounted scarcely to one-half that of England upon an equal surface, and the state of the rural population was even worse than could be charged to this difference in production. Let us pause, in the first place, at this period of her history, which is more important here than for the rest of the United Kingdom. Let us ascertain what was the condition at that time both of her agriculture and her rural population, and what were the causes producing it; after that, I shall proceed to notice what has occurred since.

Of the four large provinces which once formed separate kingdoms, Leinster is the richest in point of agriculture, and in this division Dublin is situated; next comes about one-half of Ulster, in which is Belfast; then Munster, where we find Cork and Limerick; and lastly Connaught, with part of Ulster, one of the poorest and most barren tracts of country in the world. In 1847, the relative productiveness of county Meath in Leinster, and county Mayo in Connaught, was as ten to one; in the former, rents were 30s. per acre, which is equal to the best of the English counties; and in the latter the rate was 3s. In Ulster, counties Armagh, Down, and Antrim, surrounding Belfast, and in Munster, counties Limerick and Tipperary, the most fertile in Ireland, rival Leinster in productiveness; but even in the richest districts the

poverty of the cultivator was reacting upon the land. The absence of capital was apparent almost everywhere. In favoured parts, the natural richness of the soil, indeed, made up for what was otherwise lacking; but where this resource failed, the misery was frightful.

Of the two capitals which contribute to rural production, the principal one—sunk capital, that which consists of all kinds of works, which in process of time accumulate upon, and are incorporated with, the soil, while bringing it into a proper state of productiveness, including buildings, fences, roads, improvers, drainage, and appropriations to special crops—was almost altogether wanting. Gentlemen's parks, to be sure, were kept up with a care equal to those in England; but whereas in the latter country it was often impossible to distinguish the farm from the park, a most distressing contrast showed itself in Ireland as soon as the bounds of the reserved enclosure were passed. No more ditches for carrying off the water; no trees, hedges, and well-kept fences, nor trim and well-defined roads; everywhere bare and neglected land—no further labour bestowed upon it than was absolutely necessary; no longer those pretty English farm-houses covered with clematis and honeysuckle, with their offices always convenient, and often ornamental,—but instead, mud cabins built by the tenant himself, and never repaired by the landlord.

The second, or working capital, consisting of cattle, implements, seeds, and harvests stored, were not so entirely wanting, because it is less possible to do without them. The quantity of large cattle was not so deficient, owing to the immense facilities for feeding them afforded by the general and spontaneous growth of grass; but still the number was much less than might and ought to

have been, and what there were, were for the most part inferior. Pigs, reared almost always in the house of the cultivator, gave a tolerable return; but the deficiency in sheep was very great. Of these the proportion, as compared to England, was as one to eight, and no knowledge as to the means for improving the breeds existed. As to implements, there was an absence of the most simple descriptions; scarcely any ploughs or carts, spades and panniers supplying the place of all other tilling implements; and this state of matters existing, too, even next door to the richest country in the world for agricultural machinery; no sort of advances made to the farmers—not even sufficient provisions for food,—in consequence of which most of them were obliged to borrow, upon heavy terms, even their seed and a little flour for bread, until harvest.

Intellectual capital or agricultural skill had made no greater progress. The four-year course was scarcely known, save upon a few farms, which were managed by Englishmen or Scotchmen. Very few turnips, beans, or artificial grasses; even the natural grass-lands, that invaluable treasure peculiar to the soil and climate, were filled with stagnant pools, and covered with weeds. Owing to the want of the proper means for maintaining the fertility of the land, wheat and barley were little cultivated; all was sacrificed to two crops, destined chiefly for human food—namely, oats and potatoes,—and yet both indifferently understood, inasmuch as they were continuously taken off the same land as long as it continued to yield anything.

Imagination fails to appreciate the loss which a country in such a state sustains. To have furnished Ireland with the capital which she lacked in sheep alone, as compared

to England, would have required £20,000,000 sterling. Double that amount at least would have been necessary for other kinds of cattle, £120,000,000 for draining, and a like sum for the construction of more comfortable dwellings, fences and country roads, and for the purchase of the most necessary implements. In all say £300,000,000, which would still have been only £16 per acre. Certainly a much larger sum has been absorbed by England.

The advocates for large property exclusively had some cause for being perplexed when the question was mooted with reference to Ireland. Large property there ruled supreme, more so than in England, or even in Scotland. A few small proprietors existed in the neighbourhood of large towns, where a little trade and manufactures had developed a citizen class ; the rest of the island was divided into immense estates of from one thousand to one hundred thousand acres,* and the greater the extent the more dilapidated their condition. The largest remained in a state of nature, like the famous district of Connemara, in Connaught, well known by the name of Mártin's Estate. Entails, much more common than in England, prevented most of these domains from being sold. The primitive law of the land was *gavelkind*, or equal division among the male children, until the English imported the right of primogeniture.

In their turn, those who considered small farming as the universal panacea were no less perplexed, for if Ireland was the land of very large properties, it was also, *par excellence*, the country of very small farming. There were no fewer than 300,000 farms below five acres, 250,000 from five to fifteen, 80,000 from fifteen to thirty,

* The Irish acre is equal to 65 ares 55 centiares—rather more than 1¼ imperial acres.

and 50,000 only above thirty acres. The law of succession favoured this division, by causing the partition of the leases among the children, and this was not, as in England, a dead letter.

This combination of large property and small farming, which in different parts of England and Scotland has had such good effects, produced a consequence quite the reverse in Ireland. Proprietors and cultivators seemed determined upon ruining themselves by doing all in their power to destroy the instrument of their common wealth —the soil. Instead of that salutary custom adopted by the English proprietors of residing upon their properties, the Irish landlords were always absent, and drew their whole rents for expenditure elsewhere. They let their lands when they could for long periods to English speculators, who were represented by agents, called middlemen. Improvident and spendthrift as all are who get money without knowing how—having, besides, only uncertain and precarious incomes, because they neglected to make seasonable advances—these landlords mostly all lived beyond their resources, consequently their debts in the end increased to such an extent that the bulk of their fortune was swept away.

The middlemen in their turn, intent upon increasing their profits without expending a shilling, having no interest, direct or personal, in the farming properly so called, sub-let the land to an unlimited extent. The rural population having multiplied to excess, numbering about twenty-five to one hundred acres, whilst it is sixteen in France, twelve in England, and five in the Lowlands of Scotland, only too readily responded to the call, and the consequence was an unrestrained competition among the cultivators for possession of the land. As none of them

possessed more capital than his neighbour, no one had a preference in this competition. Every father of a family desired to become a tenant or locator upon a few patches of land, which he might work with the assistance of his family. Thus the cottier system, as it is called, grew up—a system not bad in itself, unless carried to extreme; for, besides that it admits of dispensing with capital, when that is not forthcoming, by substituting labour in its stead, it has this advantage, that it does away with the paid servant—that is to say, that class of men who live entirely upon the demand for labour, and are subjected to its vicissitudes. In 1847, Ireland, strictly speaking, contained very few persons receiving wages; those who would otherwise have been day-labourers were small farmers. But there must be a limit to everything, and the division of allotments came to an end, owing to the increasing number of competitors. The small tenants had commenced by taking farms upon which a family could barely exist after paying their rent. These farms then underwent a first division, then a second and a third, until at last it came to those 600,000 rentings below fifteen acres—that is to say, to a point where the cultivator could obtain only just sufficient to keep him in life, where the least failure of the crop began by rendering payment of rent impossible, and ended in being a sentence of death for the tenant himself.

Owing to the superior quality of the soil and abundance of hands, the gross produce, although equal to only half of the English, was still pretty considerable, and, reduced to French value, might be estimated at 800,000,000 francs, or 100 francs per hectare, (=32s. per acre), as in France, divided as follows :—

Wheat, . . .	60,000,000	of francs.
Barley, . . .	30,000,000	„
Oats, . . .	150,000,000	„
Potatoes, . . .	250,000,000	„
Flax and Gardens, .	50,000,000	„
	540,000,000	„
Animal production, .	260,000,000*	„
	800,000,000	of francs.

Thus the animal productions were, as in France, equal to half the value of the vegetable—sure indication of an exhausting culture; whilst both in England and Scotland the former are superior to the latter, and the inclination is every day further in the same direction—sign of an ameliorating husbandry. This return of 100 francs per hectare may be thus divided :—

Proprietor's rent,	32	francs per hectare,		10s. 0d.	per acre.
Middleman's profit,	8	„	„	2s. 8d.	„
Taxes, . .	5	„	„	1s. 8d.	„
Incidental expenses,	5	„	„	1s. 8d.	„
Wages, . .	50	„	„	16s. 0d.	„
	100	„	„	32s. 0d.	„

Distributed over the whole population of the island, the total value of agricultural production gave 100 francs per head, whilst the same dividend amounted to 140 francs for France, and for England and Scotland 200. Wages in the same way averaged 80 francs per head for the labouring rural population, whilst in France it is 125 francs, in England 160, and Scotland 200.

The result of these figures shows the inadequate production, as compared to the whole population, and particularly to the rural portion. In France, our whole population does not exceed twenty-six per hundred acres,

* Say 10s. or 10s. 6d. per acre. In France, the average of the same production (oxen, sheep, horses, and pigs) is 8s. 6d., and in England upwards of 30s.

but in Ireland it amounts to forty; and our rural population, upon an equal surface, is equivalent to only two-thirds of the rural population of Ireland. In England the whole population was more numerous, but then the agricultural production was double, and the rural population amounted to only half that of Ireland. In Scotland the proportions were still more favourable.

We may notice, besides, as in favour of our country, that the rural population of France is not entirely dependent upon wages; they partake of a considerable portion of the rent, as proprietors of part of the soil—likewise a portion of the profit, since they include farmers and *métayers;* whilst in Ireland the peasantry not being proprietors, and the farmers-general, or middlemen, belonging to the urban population, the rural population was living entirely upon that which would otherwise have been wages. I mean here by wages all that was given up to the small tenantry as the return for their labour, and which, though not actually paid them in the shape of wages, was nevertheless the real earning, since return upon capital and agricultural skill went for nothing.

It has often been alleged that rents in Ireland were raised to an undue extent. No doubt there is some truth in the accusation, but it is not the rate in itself which deserves it. We see, in fact, that the rent reached in Ireland, as in France, in England, and even in Scotland, to only one-third of the gross production, besides being in many cases merely nominal; the actual amount collected fell to one-fourth or one-fifth of the produce, and probably even lower. In a well-constituted state, such a rent would scarcely have sufficed to feed the non-rural population; under a better system, its tendency would have been to rise rather than to fall.

The wretched condition of the cultivators cannot be

attributed to the small amount of wages as distributed over the whole, for not only did this item amount in principle to half the gross produce, while in England and Scotland it is only a fourth, but it was frequently higher owing to the non-payment of the rent. Nowhere, perhaps, was the share of wages greater; whereas, compared to the rent, it should have been less rather than more.

Finally, neither can we charge the blame to that portion which represents profit, for this item amounted to only one-twelfth of the gross produce, whereas in Scotland it reaches a fourth; and, under a good system of rural economy, it would have been far from adequate.

The real defect as regards the rent was the way in which it was spent. In place of helping to make capital on the spot, it was remitted to England or the Continent, and there lost as far as any benefit to Ireland was concerned.* This constant drain of rent was shown in the continual export of agricultural produce. About half the wheat crop, a fourth of the oats, the greater portion of the animal produce—upon the whole, about one-third of the total rural production—was yearly transmitted from Ireland to England, and went to pay either rent, or, what came to the same thing, interest upon mortgages in the hands principally of English capitalists. A country is enriched through its exports when it receives something in exchange. This is the case with Scotland; but when, as in Ireland, there is a constant export, and no return, it is ruinous. That island producing just the necessary

* Many English economists, Mr M'Culloch in particular, whose authority in these matters is great, have disputed the evil influence generally attributed to the non-residence of proprietors. The reasons advanced in favour of this opinion are purely theoretical. They would merit a careful examination if this were a didactic exposition of the principles of the science; but, as far as regards Ireland at least, the question appears to me to be settled by the facts.

amount of food for its inhabitants, whatever went out of it created a void which was not filled up by any return.

Part of the taxes followed the same course. Direct taxation, indeed, was not in itself heavier than the rent, since it amounted to only 5 francs per hectare, whilst in England it was 25. But in England this was spent upon the spot; whereas in Ireland, the greater part going to pay the Anglican clergy, who were almost as great absentees as the landed proprietors, constituted, like the rent, a certain yearly loss. What remained behind but ill performed the part due from taxation in every well-governed country—namely, the increase of national capital in roads, bridges, canals, public buildings, and maintenance of the public peace.

The same disadvantage did not result from the middleman's profit, as that remained in the country, but it scarcely ever returned to farming.

These are certainly powerful causes of impoverishment. Still they were not sufficient to account for that state of misery into which the greater part of Ireland had fallen, apart from the mad multiplication of the rural population: in this lay the root of the evil. Even with the regular export of rent and a portion of the taxes, and in the absence of capital, public as well as private, the rural population would have been able to live, had they been, as in England, less numerous by half. The enormous number of starving beggars had upset all the principles of production. At one time Ireland was not nearly so populous: in 1750 the population was two millions; and in 1800, four millions, instead of the eight millions of 1846. The whole island formed then but one immense pasture-country, for which by nature it is best fitted, and which is the most profitable account to which it can be turned. When this superabundant population arose, the

potato crop, at once the cause and effect of the excess, was proportionately extended, and absorbed the whole attention, labour, and manure of the country. Of all known crops, the potato furnishes, particularly in Ireland, the largest quantity of human food upon a given surface. This renders it one of the most valuable gifts of Providence, but only on condition that it is not too greatly extended, as then it becomes a scourge, for it exhausts without renewing the means of production.

Experience has too well proved the danger of depending upon one product as food for a whole nation. Besides, the potato, by itself, constitutes a gross food, and is not nearly so nourishing as an equal weight and bulk of cereals and leguminous food—a sufficient reason for not making it the staple article of human consumption. It is liable also to casualties different from those which befall the grain crops, and this makes it an inestimable complement to these crops, but should prevent it being relied upon as the sole article of food. The true place of the potato, in a well-ordered rural economy, is as a plentiful provision for cattle, and a supplement to that of man, so that, in the event of other crops failing, this resource might supply the deficiency. But Ireland was not in a position to choose the best; necessity called, and required to be obeyed. The potato already occupied a third of the arable land, and threatened to extend further; it alone formed three-fourths of the food of the peasantry, the other fourth consisting also of an inferior food—namely, oats.

So long as these two productions were obtainable in any quantity, the population of small tenantry, although badly off, yet managed to exist, and unfortunately multiplied. When the crop happened to fail, or only to decrease, scarcity decimated their numbers; and when, on

these occasions, they were unable to pay their rent, the landlord ordered them to be ejected, which was not very easily done. Being only tenants at will, nothing remained for it but an armed resistance. The agent charged to levy the rent, and the police who came to enforce the ejectment, were received with a discharge of fire-arms; and when such outrages were followed up by indictments, witnesses could not be found to support the accusations, nor juries to find the prisoners guilty. The dispossessed tenants, having no means of subsistence, became thieves, their wives and children turned beggars, and, as there was no poor's tax—a dangerous remedy no doubt, but sometimes necessary—there was no limit to the extension of this misery and crime. The most fertile districts suffered severely from these troubles; the evil reached its climax in the worst parts of the island, namely, the west.

The population of Connaught had reached nearly two for every five acres, or equal to our rich Normandy departments; and the nature of the soil afforded but an insufficient resource for the sustenance of such a population, half the land, or two out of four millions of acres, being incapable of cultivation. The neighbouring counties of Donegal and Kerry were still worse off; one-third only of their area consisted of arable land, the rest being either mountains or lakes. Suppose the population of the departments of La Manche, Somme, or Calvados, transported to the Higher or Lower Alps, and consider what would be the consequence! These counties having neither busy manufactures nor populous towns, the entire population lived by agriculture—if that could be called agriculture which was but the short-sighted and hungry exhaustion of the productive powers of the soil. Is it surprising that it became impossible to collect even the

small rent of 5s. per acre, or that famine in all its horrors should, as it were, have taken up its abode there?

Among the expedients set on foot for making as much out of the land as was possible without capital, two apparently offered great advantages to the landlord, but were ultimately found to be as ruinous for him as for the tenant: these were, partnership-tenure, and the con-acre system.

Partnership-tenure—or, as it was also called, *rundale* or *runrig*, a word apparently of Scandinavian origin—consisted in letting a piece of land of a given extent (for example, one hundred, two hundred, or five hundred acres) to a village, the inhabitants of which constituted the partners in the concern. That portion which they could not cultivate was common to all, the remainder being divided annually among the different families; and each of these lots might again be divided among the several members of a family, if they thought right to do so. After the crop was gathered, the whole land was again common property, and a new partition was made for the following year. In the most backward districts of France we have a good many villages somewhat upon the same principle, only with this difference, that, in place of farming the property, the community owns it: but, notwithstanding this advantage, the right in common everywhere produces similar results—namely, the impoverishment both of the land and of the people who cultivate it; and this poverty becomes greater and greater as the population increases. We have seen a hundred acres let in this way to one hundred co-tenants, who lived in the greatest misery, and never succeeded in paying any rent. This system was to be found most prevalent in the least fertile districts, and such villages as adopted it possessed scarcely any cattle, while the

people were almost totally ignorant of the most simple methods of farming.

The con-acre system was scarcely any better. When, from some cause or other, a field had accumulated a sufficient amount of fertility, it was let in that state to a tenant for a single crop at an exorbitant price, usually payable in days' work. This person planted it with potatoes, and took as much out of it as he could with one crop. Near Limerick, the ordinary rent of fields upon the con-acre system was £30 per acre; and at this rate a half or even smaller parts of an acre were sometimes let. "Competition for the land, especially when possessed of some fertility," remarked a witness upon the inquiry of 1833, "is so great in some parts of Ireland, that hardly any rent asked is not immediately promised." In Ireland, however, more than anywhere else, to promise and to fulfil are two different things. But the two parties contracting did not look at the matter so closely; each in the mean time got what he wanted—the one, possession of the land; the other, the prospect of an unreasonable rent. When accounts came to be settled between them, they arranged as best they might.

Paring and burning, which sacrifices future prospects for the sake of the present, was much practised; and this accounts for the large extent of uncultivated, though cultivable, land which is found in a country where arable land was the object of such spirited competition. Years, in fact, of dead fallow were necessary in order to repair the injury inflicted by one or two bad crops upon a soil treated in this way, unless done as the starting-point of a skilful and progressive system of farming, which never happened in Ireland.

CHAPTER XXIV.

STATE OF WARFARE.

How came such an immense difference to exist between two islands close together, and to all appearance subject to the same laws: one, and that the least fertile of the two, paying rents of 25s. per acre, heavy taxes, a considerable profit and high wages, maintaining also a larger population in a greater degree of comfort; while the other, more fertile, with a smaller population, paid lower rents, profits and taxes lower still, and inadequate wages? The cause of so strange an anomaly is comprised in one word—the oppression of Ireland. Having witnessed both in England and in Scotland the beneficial effects of liberty, we now see in Ireland the results of a contrary state. The two sides of the same picture will thus have been presented to our view.

To escape this responsibility, the English contend that the Irish character has peculiar failings, which under any circumstances would have arrested their rise as a nation. I am willing to believe that the Celtic race has not the same degree of energy as the Anglo-Saxon, but the difference does not appear to me sufficient to account for everything. More than one instance, both in ancient and modern history, proves that the Irish possess eminent qualities. If Ireland, in spite of its fearful disor-

ganisation, has produced energetic men, and great spirits of all kinds, how much more would this have been the case if the national strength had not been violently repressed! That which, among an oppressed people, has not attained beyond a transitory light, would, in a freer atmosphere, have become a bright and lasting flame.

The English attribute an enervating influence to the Catholic religion. This assertion may also be in some respects well founded; for it is true that in general the Protestant nations of modern Europe exhibit a steadier and more decided character than the Catholic; but it has not always been so, and even at the present day it is not an absolute rule. Spain and Italy, in arrear at the present day, preceded Holland, England, and Germany, in civilisation; and I do not see that Catholic Belgium, and to a certain extent France herself, are much inferior to most Protestant countries.

A patent and undeniable fact, besides, replies to these imputations. For some years past a large emigration of Irish has been going on to America. As soon as they put foot upon that new soil, where they are no longer subject to the restraint of England, but free to exercise their characteristic activity, these demoralised, degraded, and improvident beings become changed, and take their position among the most industrious citizens of the United States. Even their fanaticism, about which so much is said, disappears when their religion is no longer persecuted. When permitted to enjoy religious liberty, they become tolerant of others, and voluntarily free themselves from that exclusive domination of their clergy which they so eagerly embrace upon their native soil. All the prejudices in the world cannot countervail this incontestible fact, which is confirmed and strengthened every day; for it is not a matter relating to a few individuals only,

but to an entire people flying from Europe, where they slave and suffer, to rise to an independent and proud condition on the other side of the Atlantic.

No doubt—at least so it appears to me—had Ireland been cast in a more distant part of the ocean, in place of so near to her powerful sister, her career would have been a brilliant one ; or as now situated, if, instead of being much the smaller island, she had been the larger of the two, she would have ultimately absorbed the other, and given her stamp to British civilisation. Neither the national character nor the Catholic faith would have been material obstacles to this so different a destiny. Her whole misfortune consists in this, that, being very near, she is the more feeble of the two, and also that she is not near enough nor weak enough to allow herself to be absorbed without resistance,—the worst of all conditions for a people. Scotland also resisted assimilation with England. But besides an affinity of race and creed there, which was not the case with Ireland, the proximity of the two countries and disproportion in population forced her in time to yield. Ireland remains conquered and refractory.

As a consequence of their unbending temperament, the English will not put up with anything that does not belong to themselves ; their disposition is exclusive ; they have, moreover, an inveterate hatred of the Papacy, which they look upon as irreconcilable with liberty. In their eyes, Ireland was not only a formidable neighbour and natural enemy ; it was odious as a nation, and antipathetic to all their ideas. Unable to subdue it, England sought to crush it.

This was England's grand excuse. It would no doubt have been far better for both countries had England from the first adopted a more humane policy towards

the *sister isle*, as she sometimes calls it ; but after all, in attempting to incorporate this neighbouring country, England only followed the same course that has been pursued by other nations. Had the English entertained a true fraternal feeling for the Irish, it would certainly have been a fine example, though a solitary one, in times when nations mutually sought each other's destruction. Have we not seen in our own country, as well as elsewhere, Catholics and Protestants unmercifully massacring each other ? Throughout history do we not find fire and sword sweeping over whole kingdoms, in order to extinguish the smallest germ of a distinct nationality, and to mould their ruins into vast empires ? Have any of the great nations (*unités nationales*) been formed otherwise ? Does not that perpetual misunderstanding still exist, which causes contests between men and classes and nations ; and is not the fact of being born upon opposite sides of a river sufficient excuse for people tearing each other to pieces ? Looking at it in this way, England's fault was in not having done enough, since the assimilation was not complete. Be this as it may, the state of open warfare which for ages was the normal condition of Ireland in its relations with England, only too well accounts for the contrast we are about to notice in the rural economy of the two islands.

The first result is the state of property. Most of the Irish properties were originally confiscations, from whence arose that evil which, although not confined to Ireland, being found to a certain extent everywhere, took a wider extension there, namely *absenteeism*.

The English invaders always looked upon Ireland as a foreign and hostile country, which was good to possess, but where they would rather not establish themselves. As early as the thirteenth century, this feeling was ap-

parent among the Norman barons, who would not reside upon their Irish grants. Their adopted country was England, and there they leagued themselves around their chief for mutual protection. After them, every renewed attempt of England to subdue Ireland was followed by a new importation of English and Scotch proprietors, who came always with the same object—namely, to spoil the inhabitants, and to make as much out of the land as possible, but not to take up their abode upon it. During Elizabeth's reign, six hundred thousand acres were thus distributed; under James I., six entire counties were confiscated and partitioned out: one was altogether made over to the corporations of London, and is still held by them, whence its name Londonderry. In the reign of Charles I., all Connaught was declared the property of the Crown. Under Cromwell the same system of appropriation was applied to the other three provinces, and there was even a proposal to sell all the Irish lands to the Jews. The finishing-stroke to this work was under Charles II. and William III. Every government of England under absolute monarchy — the Tudors and Stuarts, the Commonwealth, the Restoration and Constitutional monarchies, all had the same idea with respect to Ireland—namely, to prevent the Irish holding land in their own country.

Almost all property is derived from conquest, but in time it gradually loses that character. The residence of the conquerors among the conquered people at length brings about a mixture of races and conformity of interests; but in Ireland, opposition remained as lively as at first. A new element—religion—had traced one of those indelible lines of demarcation between the conquerors and the conquered which keeps up a lasting hatred. England, after she adopted Protestantism, wished to

plant it by force in Ireland; but the more England persevered, the more determined was Ireland to remain Catholic. The war of nationalities now took the character of a religious war—the most unsparing of all, as it gives to worldly interests and feelings the excuse of a faith. After unexampled efforts, England at last succeeded in establishing in Ireland a Protestant community, to the extent of one-fifth of its population, the remaining four-fifths being Catholic. The former chiefly resided in the towns, and the latter in the country. The proprietors belonging in general to one religion, and the farmers to another, there could be no bond of connection between the two classes, but everything to disunite them. Confiscations, which had made the one masters of the soil, and reduced the other to the condition of helots, had not been accomplished without frightful bloodshed. These sanguinary recollections, continually revived by legal persecutions, stirred up animosity to frenzy. Proprietors took good care not to live upon their lands where they were exposed to personal violence, and their representatives —the middlemen—absented themselves for the same reason. Both from a distance oppressed a people whom they detested, and they were answered with maledictions, and often by murders.

Besides its absolute necessity as a means of progress, rent, in most civilised countries, is justified by the expenditure of that capital which, in process of time, is put into the soil. There are few lands, whether in France or England, the actual value of which represents anything else than this capital. Often even their value is far from representing the total amount of money they have absorbed. In Ireland, property had not this justification, which otherwise might have legitimised its revolutionary origin. Rent was not employed for the benefit of the land from which

it was drawn, and did not represent a return from any capital, since the proprietor took care to lay out nothing. It was the produce of brute force, and was, like the rest of the Irish constitution, like the tithes imposed upon a Catholic people for the support of a Protestant clergy, neither more nor less than an excuse for war and oppression.

Strict entails, which had here a special object besides that of aristocratic aggrandisement, helped to aggravate the odious character of the rent. A few properties had managed to change hands, and, in consequence of these voluntary mutations, had lost the stigma attaching to their original tenure; but the rest traced back their origin through regular succession to one of those inauspicious dates, chronicled in the hearts of the Irish as the most grievous moments of their long sufferings. As another consequence of this state of warfare, England had stifled every species of manufacture and commerce in Ireland; but she now discovers her mistake, and begins to make amends, though tardily, and with an inclination still to the old distrust. In times past she fell into the common mistake of thinking that the prosperity of her neighbours was incompatible with her own, and therefore continued to smother in Ireland that wealth which gives power. England's history abounds with violent measures adopted to this end, and she only too well succeeded. Her desire was to make Ireland poor, and in this she succeeded. We have witnessed, both in England and Scotland, how important to agriculture is the neighbourhood of a growing industry and commerce; for besides that it furnishes markets and capital, it permits, by a fresh demand for labour, an unlimited increase in the rural population. The want of this, especially, has been fatal to Ireland. As there was no other employment for the people, no other

means of subsistence except the land, upon the land fell the whole burden of the population ; and although the island was less populous, upon the whole, than England, the rural districts were twofold more so, because manufactures, which in England engage two-thirds of the hands, were entirely wanting.

This multiplication of the rural population was encouraged by the proprietors, because it increased competition, brought down wages, and raised the rent of their lands,—a calculation as false as it was culpable, for the rent thus extorted ended in becoming delusive. Everywhere else, and particularly in England, proprietors are obliged to construct, and keep in repair, the buildings which serve as dwellings for most of the farmers. In this way they have an interest, to a certain extent, in not multiplying the number beyond a certain point. In Ireland, as each family built their own cabin, they had, or thought they had, the opposite interest. The cultivators, in their turn, prompted to improvidence by their very indigence, giving themselves little concern about the fate of their children, who could neither be bettered nor become worse off, became beggars (*proletaires*) in the full acceptation of the old Latin word *proletarii*, which vulgarly expresses one of the most sad consequences of human degradation.

There were also two mysterious causes of this unlimited propagation, both proceeding from the miserable condition of the people. The first is the inexplicable physiological law which ordains, for all living species, that the means of reproduction increase in proportion to the chances of destruction. The action of this law may be observed among the lower animals, and also in the human race inhabiting unhealthy climates. As the chances of death increase, births also increase ; and, whether among

animals or men, the strongest and best-fed races are not those which multiply most. Indifferent as to individual life, nature's first care is to preserve the species.

The second cause was altogether political. Ireland, under its state of oppression, instinctively felt that it had no other power to depend upon than numbers, and that it was only in this way it could defend itself. At every renewal of the grand struggle, England proceeded to regular exterminations, but a few years sufficed to fill up the gap. Like an army which closes the gap made in its ranks by cannon, the Irish rapidly repaired the breaches made among them by wars and famine. Attempts had often been made to induce them to emigrate, but always without success. Despoiled of all property in their native soil, they covered it with their children, as a perpetual protest against the invasion, and that they might at least keep possession *de facto*, awaiting a period of restitution. Population went on increasing, especially in the mountains of the west, those Asturias of Ireland, which have always been the last refuge of its nationality.

All this sufficiently shows, without pleading the influences of race and religion, how it is that the Protestant party of the provinces of Leinster and Ulster have suffered less than the rest of the country. In Leinster an English, and in Ulster a Scotch colony, had established themselves: the first around Dublin, which is the seat of the government; the other round Belfast, which is but a short distance from the coast of Scotland. These settlers enjoyed all kinds of privileges, while severe laws, rigorously enforced, interdicted all lucrative employment to the Catholics. The splendour of Dublin, its dense population, the military force kept there, the retinue of high-salaried functionaries, all these making it, as it were, the citadel of England in the heart of Ireland, had the effect which

artificial capitals always have—namely, the enrichment of the immediate neighbourhood at the expense of the community at large.

As to Belfast, the linen trade, the only manufacture worthy of the name which existed in Ireland, and which is an agricultural as well as a manufacturing business, flourished there without opposition on the part of the English. The annual export of linens from Belfast was valued at £4,000,000, and of this £1,200,000 was the proportion paid for wages. Nothing of the kind is to be found in other parts of the country. The most fertile districts, such as Tipperary, were just those where confiscations and devastations had been most rigorously put in force, without succeeding, however, in driving out the native race. The Protestants there are still called Cromwellians, or followers of Cromwell, as if it were only yesterday that the frightful incursion of that bloody tyrant had taken place.

Everybody has heard of the bands of armed ruffians which have always existed in Ireland. They have been named, from time to time, according to the sign they adopted, *Whiteboys*, *Steelboys*, *Defenders*, *Levellers*, *Thrashers* (their weapon being a flail), *Carders* (as armed with carding-machines), *Rockites* (from the pretended Captain Rock), and *Molly Maguires* (from the name of a fanciful woman-chief, like the Rebecca of Wales), &c. These bands signalised themselves wherever they went by horrible atrocities, the only possible revenge for poor Ireland! Close to the most peaceable country in the world, where a soldier is never seen, and where, without a national guard, without an army or public force of any kind, each individual, under the sole protection of the law, enjoys perfect security, to the lasting credit of the nation, was to be found a country

profoundly troubled by a constant peasant war. When murders, fire, and plunder were suspended for a short time, agitation did not cease; it continued under other forms, summing up its grievances and its hopes in that national cry repeated on all occasions, *Ireland for the Irish!*

We must do England the justice to say, that she at last recoiled before her work. About thirty years ago, when more correct views in political economy began to dawn in England, she found out her mistake, and that a kinder policy should be adopted, in order to gain the attachment of the sister isle. The political emancipation of the Catholics, in 1829, was the first decided step in the new direction. Since that time, Ireland has taken part in the government of the United Kingdom. There is now no chance of a return to the old outrages. This was a great concession, no doubt; yet it was not enough. From 1830 to 1847, every Ministry has looked upon Ireland as one of its chief difficulties. All honestly sought a remedy for its state of inveterate misery, the growth of ages, and which seemed to require ages to cure. Even O'Connell, speaking for Ireland, pointed out only one way, and that would have been both impossible and ineffectual—the Repeal of the Union. Impossible, inasmuch as England could never, after having done so much to incorporate her neighbour with herself, consent to a separation; and ineffectual, inasmuch as Repeal had nothing to do with the real merits of the question—the constitution of property and superabundance of population. Political expedients could produce effects only in the long-run; a more local and immediate remedy was required.

The Irish themselves were quite aware of this, and pointed out very clearly what they considered a remedy;

but it was not listened to, because, under a form more or less disguised, it virtually involved a change in property. It was sometimes called *tenant's right*, sometimes *fixity of tenure*, and appeared to relate only to matters which concerned the landlord and tenant.

Tenant-right especially might have passed as quite harmless in its effects. It was already practised, not only in Ireland, in the province of Ulster, but in several counties of England; and some agriculturists have considered it as a very equitable and proper concession. The understanding was this, that the outgoing tenant should have a right to compensation from the new tenant for unexhausted improvements, such as manurings, marlings, limings, extra dressings, &c. So far all was correct, at least in appearance; but the difficulty consisted in agreeing about the compensation. Nothing is more difficult to estimate than unexhausted improvements; in Ireland especially, where nobody does improve, whether farmer or proprietor. The real meaning of the term was the right of the outgoing farmer to demand an indemnity for the simple fact of his being turned out, which might be called the *right to the lease*. The effects of such a principle may be easily conceived.

Even in a farming point of view, leaving the question of property alone, it is at all events doubtful if the custom of tenant-right would be advantageous. The agricultural prosperity of Lincolnshire has been attributed to tenant-right; but it has been justly remarked, that it exists also in the Weald of Sussex, the most backward part of England, and that this may be considered as one of the causes of its rural poverty. In Scotland, where everything is so well arranged for the interests of farming, the question of tenant-right has been negatived. It opens a door to fraud and trickery, and

induces the farmer to look more to the indemnity he will obtain in going out, than to good farming while he is in possession. Clever and unscrupulous farmers have been known to change from farm to farm, receiving a compensation each time, and always making money by the change.

Besides, tenant-right becomes in the long-run a charge so heavy to the incoming tenant, that it swallows up all his resources at once, and leaves him without the means of meeting the most necessary expenses. In Lincolnshire and Nottingham, where the custom prevails, it is reckoned that the incoming farmer nowadays has to pay equal to £4 or £4, 10s. per acre for the tenant-right alone, independently of the usual farm charges. In Sussex, the usual rate is 30s. to 50s., which is perhaps still heavier, since the land is in worse condition. With such advances before them, one can understand how the English agriculturists should be nearly unanimous in condemnation of tenant-right, at least as a general rule. Long leases, and, in some cases, special agreements, are deemed a sufficient solution of the difficulty.*

If it is thus with tenant-right when justified by real outlays, what would be the consequence if that right, such as it existed in Ireland, were legalised, as it was desired it should be? What the incoming farmer would

* We are not aware that the system of tenant-right has been so universally condemned. This is not the place to enter into any discussion as to the real merits of the general question; but while it may be said some convention of this kind is in many respects essential for Ireland in its present circumstances, in order to restore confidence and encourage improvement, there is no doubt a well-devised system of indemnification to tenants, as an accessory to the lease, would in general greatly tend to increase the produce of the soil. The main objection to the lease, in as far as the grand question of productiveness—the maintenance of the people—is concerned, is, that towards its close, from the uncertainty which attaches to the renewal of the tenure, there occur several years in which the tenant cannot safely apply such ameliorations as are often necessary to maintain the soil in full and vigorous bearing. His interest too frequently requires that at this period

there have had to pay, was not remuneration for improvements which had no existence, but a payment for the peaceable possession of his lease; or, as it was naïvely called, the *goodwill* of the outgoing tenant. It was difficult not to perceive in this a real right of partnership. When this right has existed from time immemorial, as in Ulster, where it appears to have been introduced with James I.'s great experiment of Protestant colonisation, and with the view of attracting foreign settlers by the expectation of great advantages, nothing can be said against it; but where it was only recently established, it is evident that its introduction could not take place without altering the conditions of property. Attempts have also been made in France to establish something of the same kind. Such is that which, in certain parts of the department of the Nord, is called *le mauvais gré* (the *ill will*); that is to say, a regular coalition among the farmers to force proprietors to let their lands low, or to give previously a large indemnity to the outgoing farmer, whether he has improved the land or not. But this abuse, which is opposed to every kind of agricultural advancement, and which has, in addition, a demoralising effect upon the rural population, has never extended very far with us.

Whatever may have been the wrongs of Irish pro-

his chief attention should be directed to exhaust the means he has previously applied. Hence the soil, for a considerable part of the lease, both at its close, as we have seen, and at its commencement—when this exhaustion is under the process of repair—may be said to be very partially performing its full functions. Unless, therefore, some well-considered principle of remuneration for unexhausted improvements be devised, we fear we must be content to submit to a material curtailment of the supplies which the soil is otherwise capable of furnishing. Tenant-right, no doubt, owes its origin to the conflicting interests of individuals; but before the problem is fully solved, it will require the introduction of higher elements.—J. D.

perty, it is clear the English Government never wished to impose upon it such a bondage as this. The question was, not only how the errors of the past were to be repaired, but also what was to be done for the future. What, then, would have become of property, and consequently of farming, which is so closely connected with it, if this plague-spot had first been put upon it? Some people have been pleased to say that tenant-right has succeeded in Ulster; but this pretended success proves nothing. For, as Mr Campbell Foster has clearly shown, in his *Letters upon the Condition of the Irish*, published in 1846, this province contains both county Down and county Donegal, in the first of which there exists comparatively a pretty fair degree of prosperity, and in the latter the extreme of Irish misery. Tenant-right existed in both; tenant-right certainly: but that of Down was not the least similar to that of Donegal. The first alone was conformable with the English practice —the utility of which may be questioned, but which is nevertheless legitimate in many respects; the second was the real Irish tenant-right, that which has nothing to do with unexhausted improvements. The latter was everywhere coincident with the common ruin both of proprietor and tenant, being, in short, nothing less than the actual value of the land, so that the unfortunate individual who took a farm had to pay the sale price for it; or, in other words, to purchase the property for liberty to pay the rent. Nothing but the imperceptible work of time can account for the establishment of such a singular and fatal anomaly.

In its turn, *fixed tenure* was nothing more nor less than a sale of the land upon the terms of a perpetual rent; and as that system did not leave the amount of rent to be fixed between the interested parties, but was regulated according to Act of Parliament upon an official valuation,

it was really, in fact, only another name for dispossession. M. de Raumer and M. de Sismondi have both extolled this forced system, which has found a good many partisans even in England. Here again it may be said that Irish property in general deserved little consideration, both on account of its origin and the use that had been made of it; but, after all, it was property—that is to say, the most solid basis of society. The name, at all events, commanded respect; and in every case there are always numerous exceptions, which it would not be right to include in a general condemnation.

There was nothing to prove, moreover, that this remedy would be efficacious. It was countenancing absenteeism, one of Ireland's greatest curses; and more than ever doing away with the connection between rent and farming. Supposing that the measure had, for the moment, good effects, it was creating for the future a position full of embarrassment and difficulty. In France, perpetual-lease rents were very common under the old regime; but they entailed such a complication of interests, that it was judged necessary to do away with them, or at least to make them essentially redeemable. The power of repurchase would have been but an insufficient remedy in Ireland. Besides, according to the manner in which it works in a country in a state of revolution, it would only in most cases have completed the expropriation. It may answer when perpetual-lease rents are the exception; but when this is the universal condition of property, it could have only an imperceptible effect; and properties which are not free, remain a long time the rule.

Ulster being constantly quoted as a favourable example of fixed tenure as well as tenant-right, proves no more in the one case than in the other. It is true that in some parts of this province, and by way of encourage-

ment to settlers, recourse was had many centuries ago to perpetual leases; but the particular districts where this system prevailed were not the most prosperous, and yet the rent, or rather fine, reserved for the nominal proprietor was quite insignificant. The tenant was the real proprietor; and one remarkable thing, inasmuch as it shows the true point of the difficulty, is that these lands, held in perpetual lease, had been divided and subdivided at least as much as any others; so that although the rent was almost nominal, most of the cultivators had not enough to live upon. Whole districts were divided into farms of only three or four acres each, and it was seldom that any above ten or twelve were to be met with.

An unmitigated dispossession of the proprietors, which the Irish more or less desired, would have been but an imperfect remedy for the evil. Properties, like farms, would have come to be divided, and after the first generation they would have found themselves in the same predicament as before. If large property should have bounds, so should small. The danger from too small properties is to be dreaded even more than from large.

Above all, then, it is necessary that a limit should be put upon this never-ending subdivision of farms, which is fraught with impoverishment to the soil, the wretchedness of the cultivators, and trouble and annoyance to proprietors.

The English Government applied itself as earnestly to encourage industrial and commercial enterprise, as it formerly did to strangle them; but time was an indispensable element for developing this new and inexhaustible source of employment, and that mass of unfortunate people could not afford to wait. It was also thought that a means for raising the rate of wages would be found in the establishment of a poor-rate for Ireland, but the number of

poor was so great that it was found to produce no sensible result; while all the time it imposed a heavy burden upon property. Others proposed to make a distribution of the uncultivated lands among the peasantry; but the too palpable reply was, that these, for the most part, were incapable of cultivation; and that, as regarded those which might be brought into condition, heavy expenses would be necessary as well as time—that time which was wanted for everything. Numerous inquiries were made, and the question discussed both publicly and privately, but without eliciting anything decisive.

The question remained to be solved by God; and that proved a terrible solution. All that long arrear of crime and error was to be atoned for only by an unexampled catastrophe.

CHAPTER XXV.

THE FAMINE AND EXODUS.

The year 1846, so disastrous throughout Europe, was particularly fatal to Ireland. The potato disease, which had some time before made its appearance, became very virulent that year, destroying three-fourths of the crop. Oats, the other resource of the poor cultivator, were equally short. On the news of this terrible disaster, it was very evident what would be the result. The English Government, alarmed at the prospect, took the most active measures for bringing supplies from all quarters. Although it had to concert measures at the same time for England, which was also suffering from scarcity, but in a less degree, the Government made extraordinary efforts to provide work for the Irish. It took half a million of labourers into its pay; made arrangements for employing them upon government works; and spent, in relief of all kinds, ten millions sterling.

The proprietors, too, very different in this respect from their forefathers, who would have looked upon these sufferings with indifference, made in their turn every possible sacrifice on behalf of their tenantry. In case of need, the law forced them to do it, for the poor-rate rose in an enormous proportion. In 1847, neither rent, taxes, nor interest on mortgages, were paid.

These tardy measures of kindness, however, did not suffice to arrest the evil. Famine was universal, and lasted several years; and when the decennial census of 1851 was taken, it was found that, instead of an important increase as usual, there was a startling decrease in the population. One million out of eight—an eighth of the population—had died of misery and starvation.

This frightful calamity has effected what years of war and oppression failed to do—it has subdued Ireland. When the Irish beheld the loss of their chief article of food, they began to perceive that there was no longer sufficient room for them on their native soil. They who had hitherto obstinately rejected the idea of emigration, as a flight before the enemy, now suddenly passed to the opposite extreme. A current, or, as it might be more aptly termed, a torrent of emigration ensued. For the last seven years—for the movement began in the height of the famine—one million five hundred thousand persons have embarked for America; and the tide still flows on. Those who have found work and are well off in the United States, write to their relatives and friends to follow their example, and at the same time send funds enough to pay the passage of these fresh emigrants. It is reckoned that the total sum thus remitted, since 1847, amounts to four millions sterling! The unfortunate Irish never dreamt of such a sum. They look upon America as the land of riches and liberty, and regard their own country as a scene of misery, slavery, and death. Ties of country and religion, once so strong, no longer hold them back. To find a name for this popular flight, we must go back to Bible history, for it can only be likened to the great migration of the Israelites, an *exodus* like that in Moses' time.

The proprietors, in place of opposing, second the movement. This they are in some measure constrained to do,

owing to the ruinous pressure of the poor-tax ever since this starving population was charged upon them, and henceforth they have great interest in thinning it.

There is certainly nothing more distressing than such a sight, and nothing could have been more strikingly condemnatory of England's conduct towards Ireland in times past. But it must, at the same time, be admitted, that all the hitherto undetermined problems are practically solved by this rapid depopulation. England finds in it at once her punishment and her safety. Ere long, the population of Ireland will have been reduced by a half; and as emigration and mortality have affected only the agricultural and Catholic part of the population, all the fundamental difficulties go along with them. Previously to 1847, the Protestants formed only a fifth of the population: they will soon come to be one-half. The rural population was twenty-four to the acre, now it is approaching to twelve, as in England; and from the wildest and most rugged districts, such as Connaught, after suffering most from the famine, the exodus takes off the greatest number. It may now be said that warfare between the two countries no longer exists: the Irish have left the field. Those who remain are not sufficiently numerous either to carry on the struggle, or to occasion much trouble by their wants. One fact, in particular, shows the general pacification of the country: agrarian outrages have ceased, and security is as complete now in Ireland as it is in England. God has employed the formidable means of which Tacitus speaks—He has made peace out of solitude.

What was before impossible in rural economy, henceforth becomes easy. The too great division of the farms is no longer a matter of necessity. In place of seven hundred thousand farms, there may now be, and indeed ought to be, only half the number, and conse-

quently of twice the size.* Where two families of cultivators were unable to exist, one may henceforth live in comfort. Potatoes and oats, which had been grown to excess, may now be reduced within proper bounds. Present wants being now less urgent, more thought may be given to the future. The four-course system may be more extended, and with it rural prosperity, of which it is the token. Meadows and pastures, hitherto neglected, begin to receive the attention they merit, and which they ought to repay a hundredfold. Ireland will again become —what she should never have ceased to be—the Emerald Isle *par excellence*—that is to say, the finest grass country in the world. Cattle, which were never sufficiently encouraged, because the population could not obtain enough to feed themselves, will now find a more abundant alimentation. Farming, in place of desperately seeking effects without causes, may at length, by substituting an ameliorating in the place of an exhausting system, be taken up at the beginning. Wages being no longer unduly depressed by a superabundance of hands, labour becomes more productive and better paid; and, provided the impetus imparted to manufactures and commerce for the last few years is maintained and increased, the overcrowding of the fields need no longer be feared, even should population rise again to its former level.

* Decrease of Holdings from 1841 to 1851.

Holdings.	1841.	1851.	Decrease.	Increase.
Above 1 and not exceeding 5 acres,	310,375	88,083	222,292	
„ 5 „ „ 15 „	252,778	191,854	60,924	
„ 15 „ „ 30 „	79,338	141,311		61,973
„ 30	48,623	149,090		100,467
	691,114	570,338	283,216	162,440
	Total Decrease, 120,776			

—*Parliamentary Papers.*—J. D.

Under this new state of affairs, the English hope to be able to introduce into Ireland their favourite system of large farming. No doubt they will, to a certain extent, succeed; but it does not appear that it ought to become the general state of the country. Large farming requires what is wanting to Ireland, and that is capital. Inducements are held out for drawing over to Ireland wealthy English or Scotch farmers. Whenever one crosses, all the newspapers proclaim it, in order to bring over others. But hitherto few have been induced to go there. Capital fears to risk itself in a country which, though tranquil, it is true, bears the marks of recent frightful disorders. To all appearance it is likely that Ireland will continue to be worked chiefly by the Irish. Agricultural regeneration will thus proceed more slowly, but its basis will be wider and more natural. Farming by the natives presupposes a small or middling farming. The example of Scotland shows what may be made out of it, and the average size of the farms may, without inconvenience, be less in Ireland than in Scotland, because of the greater fertility of the soil. Twenty or five-and-twenty acres per farm on the good lands, a couple of hundred or so in the worst, where it would be chiefly pasturage, and about fifty as the average, would probably be a fair measure. With these limits the farmer should not only live and pay rent, but accumulate capital.

The real question which concerns the production of farming capital, so deficient among the Irish, and which seems little disposed to reach them from other quarters, is that of leases. There again Scotland sets an excellent example, which cannot fail to be followed. Tenant-right —such, at least, as they understand it in Ireland—is not necessary. That engine of war is out of place in a well-

regulated community. It is the same with perpetual leases. Instead of extending them, they should rather be reduced by repurchasing the fine, and by reuniting nominal property with actual possession. What is needed are long leases, with moderate rents, and a constant care to prevent subdivision ; or, if it be desired to preserve the old system of tenants-at-will, great liberality towards the tenants on the part of proprietors. No more middlemen speculating upon under-lettings;—no more partnership-tenure, con-acre, and other contrivances for making a momentary gain at the expense of the land ; but in their place useful advances, hitherto unknown and beyond the reach of the common farmers. While necessity will oblige farmers to dispense at starting with ready-made capital, they will find such capital as they can avail themselves of, as buildings, marlings, drainings, &c., extremely useful in hastening the formation of the other. Wherever large farming is established, it can go to the expense of these ; but, otherwise, these fruitful expenditures fall as a charge on the property.

In default of natural benevolence, the poor-tax, under skilful management, has certainly acted as a powerful social lever ; it lays the proprietors under the necessity of making exertions, if they do not wish to see all their income absorbed by the workhouse. And this means of coercion, already so powerful, is not the only one which was to be employed to expiate the past wrongs of Irish property. A radical improvement in the relations between proprietor and tenant was not possible to any extent without a kind of revolution in property. Even allowing them more enlightened and liberal intentions, most of the proprietors, already overhead in debt, could do nothing : they had exhausted their credit and re-

sources. Accordingly, the English Government decided upon ordering a general liquidation.

This measure, the best of all that had been proposed, has this advantage, that, without violating the principle of property, it admits of the desired results being attained. Those proprietors who are such only in name, will disappear, and, in their stead, real proprietors will come, who will be able to make advances. This change of owners, moreover, affords an opportunity for doing away with entails; of dividing the too large estates; of sweeping away that chaos of contradictory rights which always accumulates round real property under mortgage; and takes from Irish property part of the odious associations connected with it, by breaking the chain of its traditions: valuable and positive advantages—purchased, no doubt, by the disagreeable means of a forced liquidation, but which ought in the end to save Irish property, by removing from it its exceptional character. M. Gustave de Beaumont, a great authority in Irish matters, pointed out from the first the necessity of this change.

In consequence, an act was passed by Parliament, in 1849, appointing a Royal Commission, consisting of three members, for the sale of encumbered estates. The powers of this Commission were at first conferred for only three years; but they have been extended—first for one year, and are about to be extended again. These powers consist in ordering properties burdened with debt to be sold by auction, upon the simple petition of a creditor, or of the proprietor himself, and that in the most summary way—the purchaser receiving what is called a parliamentary title—that is to say, one that is perfectly legal and indisputable, conferring an absolute right to the property, called in English *fee simple*. Those who formerly had claims

over the land, have no longer any, but only upon the purchase-money. The Commission is charged with examination into the validity of these claims, and with the distribution of the sum realised.

The functions of the new court commenced in November 1849; and up to November 1852, three years afterwards, it had received two thousand five hundred and fifty-four petitions for the sale of as many properties, representing in all an annual rental of £1,360,000, and charged with mortgages to the extent of £30,400,000, or nearly their whole value. Up to the same period, about one-third of the properties under petition—say eight hundred and thirty-nine in all—had been sold. One million two hundred and fifty thousand acres had changed hands. In 1853 and 1854 the sales were being continued in the same proportion.

The average sale-price has been at the rate of 5½ to 6 per cent on the nominal rental; or, as they say in England, eighteen years' purchase. This rate caused a great outcry on the part of the dispossessed proprietors, a pretty considerable number of whom found themselves ruined at once; but, on a nearer view, it is not found to be quite so disadvantageous. Properties in the good counties, such as Antrim, Down, Tyrone, Meath, Westmeath, and Dublin, sell at rates equal to a return to the purchaser of four per cent. If those situated in what were formerly the most wretched districts have produced only such a price as will give eight to ten per cent, it is because they were not worth more. Nothing was more uncertain than the declared rental; it was based upon that of 1847, and even then it was seldom paid. At the time of sale, several years' rent was in arrear, while the future appeared to have still worse prospects than the past, and considerable outlays on the part of the

purchasers were necessary to bring these bare lands into value.

It is no doubt vexatious that these forced sales took place at the very time when Ireland was undergoing a terrible crisis. But does it not always so happen ? Crises are just the periods which bring about and justify extraordinary measures. Calm weather is not the time chosen for throwing part of the cargo overboard to preserve the ship from future storms. The remedy is applied only when the evil is at its height : it would be still less acceptable if it came sooner. Perhaps it might have been possible to mitigate a little the working of this realisation, by giving facilities to the indebted proprietors for saving something out of the wreck. But at the time of the passing of the Incumbered Estates Bill, England had already made, without success, immense sacrifices for Ireland, and was not inclined to do more.

As to the measure itself, the necessity for it cannot be questioned. The proprietors could neither pay the interest on their debts nor borrow a fraction more. Among these accumulations of mortgages there were some dating as far back as Cromwell. One naturally pities a man who, to-day, possesses a fine property, and to-morrow finds himself with nothing ; but it is not dispossession which is the grievance, but debt. The man had been for a long time only nominal proprietor, and in one day pays for the mistakes and follies of many centuries.

Taking the number of properties sold up to the end of 1852, according to the foregoing figures, we find the average to be £10,000 for fifteen hundred and sixty acres, which is equal to nearly £6, 10s. per acre. Surely Irish land is worth, and certainly will be worth, more than this. But it must also be remembered, that this figure comprises large tracts of uncultivated land, called

the Irish Highlands; as a specimen of which Martin's estate is always quoted. This domain is of such extent that the porter's lodge stands twenty-five miles from the house. The inheritor of this vast property died in poverty, upon the ocean, while flying from the soil that no longer belonged to him. As formerly, in the case of Sutherlandshire, we are not told in what condition this gigantic property was found, which could no longer support either the owner or the tenants.

After all, the Incumbered Estates Court brings forward for sale only two and a half to three millions sterling worth of properties per annum, or the fiftieth part in extent, but in value hardly a hundredth part of the island. At this rate the sale of one-tenth, — the most burdened portion of Irish property,—will last ten years. In France, where we hamper transfers of property with expensive formalities, prejudicial both to the creditor and the owner of the land, sales more or less forced take place annually, to the extent of one-hundredth part of the total value of land in the country; and we have not several centuries of arrears to settle. If, under favour of interminable delays and expenses of the Court of Chancery, Irish proprietors had got into a habit of not paying their debts, it is just as well, for their own sakes, that they should be deprived of the opportunity for the future.

For a year past the prices given have been advancing materially. The worst sales were the first, and, as always happens in such cases, the owners of these properties were the greatest sufferers. In the good counties, land sells almost as high as in England; and in the bad, the return is about five or six per cent on the purchase. As prospects brighten in Ireland, prices will become more and more satisfactory.

The most characteristic symptom produced by these

sales is, that the land is obviously becoming more divided. The Commissioners made four thousand lots out of the eight hundred and thirty-nine domains sold up to the end of 1852, and the average price per lot was £2000. Many were sold at £1000, and these were not always the best bargains. This subdivision, generally speaking, has been approved of, as it creates what in Ireland has hitherto been wanted—a middle class. Those proprietors, whose estates have come to the hammer are not all entirely dispossessed. Some retain portions of their old properties; and in many cases such portions, being entirely free from debt, are worth more to them than the whole estate was in its involved condition. A man is not rich in proportion to the number of acres he owns, but according to the rent he draws from it; and when that can be increased by reducing the extent, there should be no hesitation about doing so.

Another no less important fact is deserving of notice, and that is, that the majority of the purchases are for Irish account. It was hoped that English or Scotch purchasers would have been induced to buy land in Ireland, and farm it; but neither, it seems, have come forward; and for this reason, that agriculture nowadays requires capital to a greater amount than ever, both in England and Scotland, and the remuneration upon the spot is quite sufficient without any necessity for going elsewhere in search of it. Besides, there exists an old distrust of Ireland, not soon to be eradicated. Neither do they like to bring themselves into contact with misery: they fear the revival of *jacqueries*, and detest popery and the papists. Ask an Englishman to invest his capital in Ireland, promising him at the same time a return of eight or ten per cent: it is much the same as proposing to a Frenchman to send his to Africa among the Arabs. This

is the reason why only an eighth of the properties sold have been purchased by other than Irishmen ; and for the most part these acquisitions have been forced on the purchasers, who, being creditors, have found no better way of getting back their money. *Martin's Estate* is a case in point. It has passed into the possession of a Life Assurance Company, who were mortgagees, and who now desire to sell it piecemeal.

The other seven-eighths of the properties sold have, generally speaking, been bought by former *middlemen ;* for even they had mortgages upon the properties which they managed, as is always the case with stewards of a liberal household ; and there is no cause for regretting it, since property thus takes a more national character.

Such, then, is the twofold movement accomplished in Ireland, beginning with depopulation, and expropriation following—the concentration of farming, and division of property, both brought within proper bounds. Farming is being just sufficiently concentrated to put a limit upon extreme division, without depriving the Irish of the possession of the soil. Notwithstanding its detestable rural system, Ireland seems to have preserved one excellent feature—namely, the almost entire absence of day-labourers, properly so called. Almost all its cultivators, consequently, will be capable of becoming small farmers as before, but under more favourable circumstances. On the other hand, the division of property suffices to make it more accessible to the natives; or, in other words, does away with their estranged and hostile feeling, at the same time that it opens to them a source of credit.

As for what is properly called small property, the introduction of which has been advocated by many clever men—among others, Mr Stuart Mill, in his new *Principles of Political Economy*—it appears to me less desirable in

the face of such facts. Ireland will probably, one day, come to small property, for its natural tendency is in that direction. Meantime, however, the rural population is too poor. It must gain in farming what is necessary to become proprietor. It is not for its interest to think about it sooner.

The English Government, being desirous at the same time of providing regenerated Ireland with capital, and outlets for its productions, offer, as they did in England, to lend £4,000,000 to such proprietors as may be desirous of draining their land, or repairing their buildings and farm-roads; the amount borrowed to be repaid at the rate of 6½ per cent for twenty-two years. A good many have accepted this offer, and are proceeding with these useful works. The Irish banks, whose history had hitherto been full of disasters, have taken up a new position. During the former struggles, a run on the banks was a means often adopted by the agitators for throwing the country into confusion. These disturbances to the circulation are, however, much less to be feared now. The banks can safely let themselves out a little more, and extend their business to a larger circle of customers. A net-work of railways begins to cover the island, and harbours and rivers are being improved.

The improvement in means of communication shows itself by the rise in agricultural commodities all over the country. Exportation, which was formerly an evil, inasmuch as it carried off the food of the people, without giving anything in return, becomes a benefit now that Ireland has fewer mouths to feed, and that rents are expended more upon the spot.

Finally, instruction in agriculture, of which Ireland stood much in need, is widely extending, and forms part of a recently organised system of popular education. Since 1826,

Ireland has possessed an Agricultural College at Templemoyle, in County Londonderry, founded by subscription, with a grant of £17,000 from the corporations of London, who own the greater part of the county. Sixty pupils there receive theoretical and practical instruction. A farm of one hundred and seventy acres, conducted by a clever Scotch agriculturist, is attached to the school. At a special inquiry in 1843, eighteen years after its foundation, it was proved that, by means of its pupils, and the examples it gave, Templemoyle had exerted a beneficial influence upon the local agriculture. In all the large Irish colleges, chairs of agriculture had been founded; but the instruction disseminated was unable to contend against the bad system of husbandry. This is a seed which can only grow under favourable conditions. These conditions being henceforth possible, the time for advantageously giving an impetus to instruction has arrived, and we see farm-schools springing up in every county. Peripatetic lecturers have been started; a new order of missionaries carry agricultural preaching into the poor villages, and disseminate cheap pamphlets among the cabins of the people. No pains are spared to acquaint the people with the two or three fundamental principles which form the basis of good husbandry,—the theory of rotations, the beneficial use of manures and improvers, and the art of breeding and fattening cattle.

One of the most remarkable examples of the new system which tends to establish itself, is to be found in the present condition of an immense property in Kerry, belonging to Lord Lansdowne, a nobleman most justly respected in England. This property contains no less than one hundred thousand acres. The greater part of it is mountain, affording excellent pasture, but not equally

suited for cultivation. A twentieth part only may be advantageously brought under the plough. It contained sixteen thousand of a population; and, in spite of the persevering efforts of the proprietor, these people lived in a state of misery. When the famine came, a fourth died from hunger or disease, without the possibility of help. Another fourth has since emigrated; and, with the aid of money remitted from America, and advances from Lord Lansdowne for facilitating emigration, the still superabundant population is rapidly going off; so that in a short time it should be reduced to only an eighth of the original number—say two thousand, which is reckoned quite sufficient to bring the land into value. The old cabins, which are not worth 50s. a-piece, are being pulled down, and in their stead more comfortable houses, though fewer in number, are erected for the new tenants, and now built by the proprietor.

It is still the system of cottiers, or small farmers, which will be followed on Lord Lansdowne's property; for really it does not seem possible to carry out any other to a great extent. But the application of this system promises for the future to be as advantageous to proprietor and tenant as formerly it was disastrous for both. In place of three thousand farms, there will be in all four hundred. The extent of arable land will probably be confined to what will pay a good profit on its cultivation; that is, ten or fifteen acres to each family, making five thousand upon the whole property. The remainder, consisting of pasture, will be occupied by cattle in place of human beings. This, it will be perceived, is the system practised in the Highlands, but on easier terms, as here the soil and climate are more favourable to manual labour and the feeding of cattle. The return to each family will be at least quad-

rupled, and the proprietor's rent will rise in proportion. The nominal rent of this immense property is £9000, of which the poor-rate still takes nearly the half. For several years to come, the greater part of the remainder will be absorbed by assistance afforded to emigrants, the erection of new farm-houses, cost of implements, new roads and fences, and stocking with cattle. These expenses will all tell by-and-by, and so will it be wherever the proprietor can come forward with similar advances.

Everything in Ireland is now approaching to a solution: the mysterious designs of Providence oftentimes bring good out of the excess of evil.

And now I bring to a close the task which I had imposed upon myself—namely, to give a summary account of the rural economy of the three kingdoms. What I have said regarding Ireland appears to me to be not the least useful in an instructive point of view; for although it does not show us what good farming is, it warns us of the troubles and dangers resulting from bad. In no part of France do we find anything quite identical: the state of warfare between two nations, which brought on the misfortunes of Ireland, has no analogy with us. Still we find, on several points of our territory, other causes producing similar effects, though with less intensity. We have all the evils resulting from absenteeism, middlemen, excess of population, crushing debt upon the land, misery of the farmer, and exhaustion of the soil. We see to what these lead when pushed to extremes. Let us learn, then, from this example, not to slumber with such an abyss under our feet; and let us take care, especially, how we speculate upon low wages through a superabundance of hands. There is no greater or more

fatal error than this. Good rents cannot be kept up unless with good wages, and good wages cannot be paid unless rents are good: both should rise and fall together. To increase production without proportionately increasing the number of hands, and thereby to add to the general comfort—this is the ultimate object of economical science, the solution of the greatest social difficulties.

APPENDIX.

The following Tables will, the Translator thinks, prove interesting and useful to the reader of this work.

AREA AND POPULATION OF GREAT BRITAIN AND IRELAND, WITH COMPARATIVE DENSITY OF THE DIFFERENT COUNTIES, ACCORDING TO THE CENSUS RETURNS OF 1851.

ENGLAND.

	Area—acres.	Population.	Pop. to five acres.
SOUTHERN COUNTIES.			
Kent,	1,041,479	615,766	2.96
Sussex,	934,851	336,844	1.80
Surrey,	478,792	683,082	7.13
Hants,	1,070,216	405,370	1.90
Dorset,	632,025	184,207	1.46
Devon,	1,657,180	567,098	1.71
Cornwall,	873,600	355,558	2.04
Total,	6,688,143	3,147,925	2.35
EASTERN COUNTIES.			
Middlesex,	180,168	1,886,576	52.35
Hertford,	391,141	167,298	2.14
Essex,	1,060,549	369,318	1.74
Suffolk,	947,681	337,215	1.78
Norfolk,	1,354,301	442,714	1.63
Bedford,	295,582	124,478	2.11
Northampton,	630,358	212,380	1.68
Cambridge,	523,861	185,405	1.77
Huntingdon,	230,865	64,183	1.39
Lincoln,	1,776,738	407,222	1.15
Total, exclusive of Middlesex,	7,211,076	2,310,213	1.60
Total,	7,391,244	4,196,789	2.84

ENGLAND—*Continued.*

	Area—acres.	Population.	Pop. to five acres.
WESTERN COUNTIES.			
Somerset,	1,047,220	443,916	2.12
Gloucester,	805,102	458,805	2.85
Monmouth,	368,399	157,418	2.14
Hereford,	534,823	115,489	1.08
Salop,	826,055	229,341	1.39
Chester,	707,078	455,725	3.22
Total,	4,288,677	1,860,694	2.17
MIDLAND COUNTIES.			
Buckingham,	466,932	163,723	1.75
Berks,	451,040	170,065	1.89
Oxford,	472,887	170,439	1.80
Wilts,	865,092	254,221	1.47
Warwick,	563,946	475,013	4.21
Worcester,	472,165	276,926	2.93
Rutland,	95,805	22,983	1.20
Leicester,	514,164	230,308	2.24
Stafford,	728,468	608,716	4.18
Nottingham,	526,076	270,427	2.57
Derby,	658,803	296,084	2.25
Total,	5,815,378	2,938,905	2.53
NORTHERN COUNTIES.			
Lancaster,	1,219,221	2,031,236	8.33
York (West Riding),	1,708,026	1,325,495	3.88
„ (East Riding),	768,419	220,983	1.44
„ (North and city),	1,352,841	251,517	0.93
Durham,	622,476	390,997	3.14
Westmoreland,	485,432	58,287	0.60
Cumberland,	1,001,273	195,492	0.98
Northumberland,	1,249,299	303,568	1.21
Total,	8,406,987	4,777,575	2.84
	Area—acres.	Population.	Pop. to five acres.
Total—England,	32,590,429	16,921,888	2.60

WALES.

NORTH.

	Area—acres.	Population.	Pop. to five acres.
Anglesey,	193,453	57,327	1.48
Caernarvon,	370,273	87,870	1.19
Denbigh,	386,052	92,583	1.20
Flint,	184,905	68,156	1.84
Merioneth,	385,291	38,843	0.50
Montgomery,	483,323	67,335	0.70
Total,	2,003,297	412,114	1.03

SOUTH.

Brecknock,	460,158	61,474	0.67
Cardigan,	443,387	70,796	0.80
Caermarthen,	606,331	110,632	0.91
Glamorgan,	547,494	231,849	2.12
Pembroke,	401,691	94,140	1.17
Radnor,	272,128	24,716	0.45
Total,	2,731,189	593,607	1.09

	Area—acres.	Population.	Pop. to five acres.
Total—Wales,	4,734,486	1,005,721	1.06

ISLANDS.

	Area—acres.	Population.	Pop. to five acres.
Man,	180,000	52,387	1.45
Jersey,	40,000	57,020	7.13
Guernsey and adjacent Islands,	32,000	29,757 3,962	5.27
Total,	252,000	143,126	2.84

SCOTLAND.

SOUTHERN DIVISION.

	Area—acres.	Population.	Pop. to five acres.
Ayr,	650,156	189,858	1.46
Berwick,	309,375	36,297	0.59
Bute,	109,375	16,608	0.76
Clackmannan,	29,744	22,951	3.86
Dumbarton,	189,844	45,103	1.19
Dumfries,	722,813	78,123	0.54
Edinburgh,	254,300	259,435	5.10
Fife,	322,031	153,546	2.38
Haddington,	185,937	36,386	0.98
Kinross,	49,531	8,924	0.90
Kirkcudbright,	610,734	43,121	0.35
Lanark,	631,719	530,169	4.20
Linlithgow,	64,375	30,135	2.33
Peebles,	226,488	10,738	0.24
Renfrew,	150,000	161,091	5.37
Roxburgh,	460,938	51,642	0.56
Selkirk,	170,313	9,809	0.29
Stirling,	295,875	86,237	1.46
Wigtown,	326,736	43,389	0.66
Total,	5,760,284	1,813,562	1.57

NORTHERN DIVISION.

Aberdeen,	1,260,625	212,032	0.84
Argyll,	2,083,126	89,298	0.21
Banff,	439,219	54,171	0.62
Caithness,	455,708	38,709	0.42
Elgin or Moray,	340,000	38,959	0.57
Forfar,	568,750	191,264	1.68
Inverness,	2,723,501	96,500	0.18
Kincardine,	252,250	34,598	0.69
Nairn,	137,500	9,956	0.36
Orkney and Shetland,	988,873	62,533	0.32
Perth,	1,814,063	138,660	0.38
Ross and Cromarty,	2,016,375	82,707	0.21
Sutherland,	1,207,188	25,793	0.11
Total,	14,287,178	1,075,180	0.38

	Area—acres.	Population.	Pop. to five acres.
Total—Scotland,	20,047,462	2,888,742	0.72

IRELAND.

LEINSTER.

(1841—Population, 1,973,731).

	Area—acres.	Population.	Pop. to five acres.
Carlow,	221,342	68,059	1.54
Dublin,	226,414	405,092	8.95
Kildare,	418,436	95,688	1.14
Kilkenny,	509,732	158,746	1.56
King's County,	493,985	112,080	1.13
Longford,	269,409	82,350	1.53
Louth,	201,906	90,812	2.25
Meath,	579,899	157,595	1.36
Queen's County,	424,854	111,623	1.31
Westmeath,	453,468	111,409	1.23
Wexford,	576,588	180,159	1.56
Wicklow,	500,178	98,978	0.99
Total,	4,876,211	1,672,591	1.72

MUNSTER.

(1841—Population, 2,396,161).

Clare,	827,994	212,428	1.28
Cork,	1,846,333	649,071	1.76
Kerry,	1,186,126	238,239	1.00
Limerick,	680,842	262,136	1.93
Tipperary,	1,061,731	331,487	1.56
Waterford,	461,553	164,051	1.78
Total,	6,064,579	1,857,412	1.53

ULSTER.

(1841—Population, 2,386,373).

Antrim,	762,453	352,264	2.32
Armagh,	328,076	196,085	2.99
Cavan,	477,360	174,071	1.82
Donegal,	1,193,443	255,160	1.07
Down,	611,919	328,754	2.69
Fermanagh,	457,195	116,007	1.27
Londonderry,	518,595	191,868	1.85
Monaghan,	319,757	141,813	2.22
Tyrone,	806,640	255,819	1.59
Total,	5,475,438	2,011,841	1.84

IRELAND—*Continued.*

CONNAUGHT.

(1841—Population, 1,418,859).

	Area—acres.	Population.	Pop. to five acres.
Galway,	1,566,354	321,831	1.03
Leitrim,	392,363	111,841	1.42
Mayo,	1,363,882	274,612	1.01
Roscommon,	607,691	173,417	1.43
Sligo,	461,753	128,510	1.39
Total,	4,392,043	1,010,211	1.15

	Area—acres.	Population.	Pop. to five acres.
Total—Ireland,	20,808,271	6,552,055	1.57
1841—Population,		8,175,124	1.96

GRAND TOTAL.

	Area—acres.	Population.	Pop. to five acres.
England,	32,590,429	16,921,888	2.60
Wales,	4,734,486	1,005,721	1.06
Islands (Man and Channel),	252,000	143,126	2.84
Scotland,	20,047,462	2,888,742	0.72
Ireland,	20,808,271	6,552,055	1.57
	78,432,648	27,511,532	1.75

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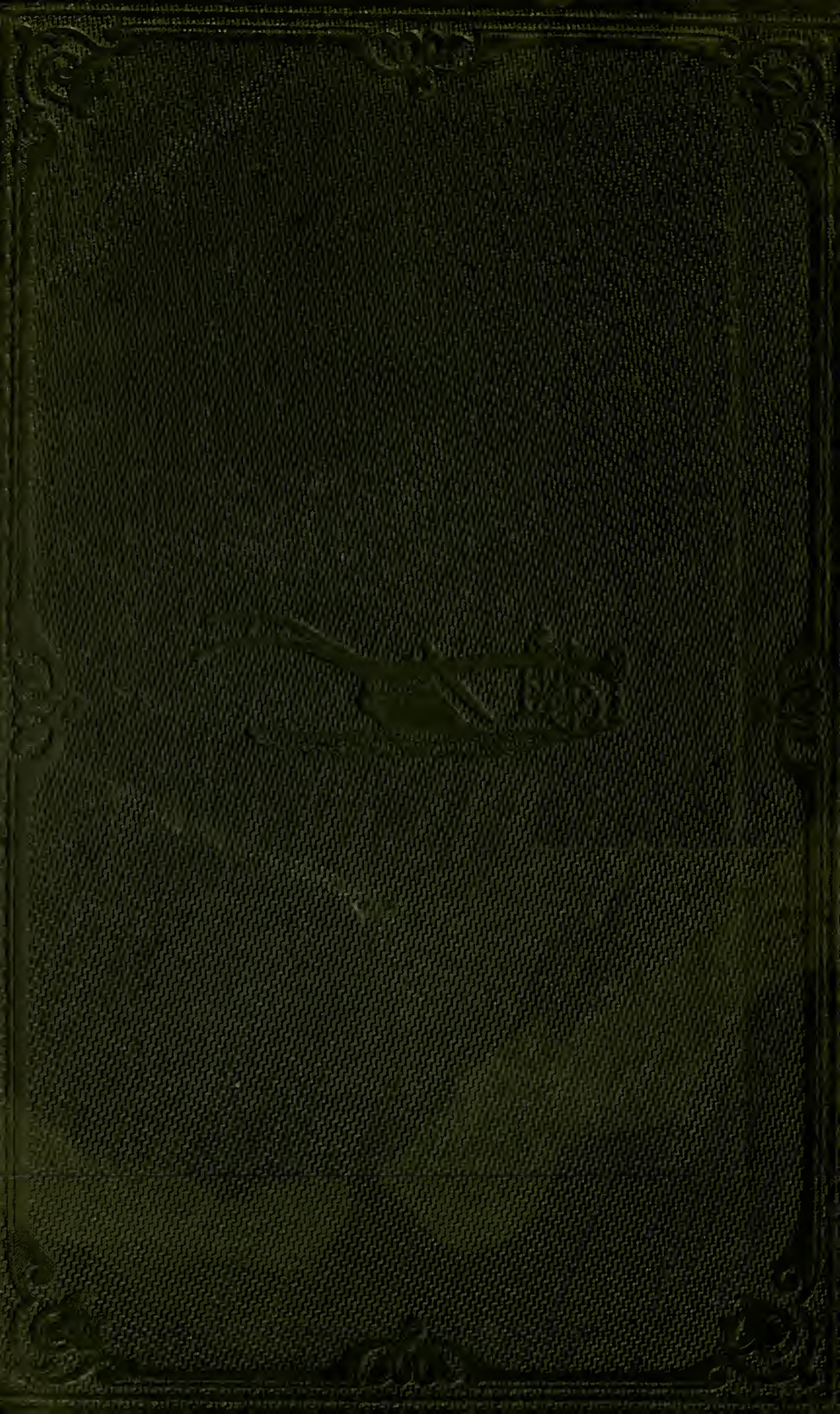
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